KOSTYAYEV, P.S., inzh.

Simplified method for calculating the quantity of slat solutions used in making cold concrete. Avt. dor. 24 no. 1:27 Ja '61. (MIRA 14:2)

(Concrete)

KOSTYAYEV, Pavel Sergeyevich; LANINA, L.I., red.; ATROSHCHENKO, L.Ye., tekhn. red.

[Start of an engineer's career]Nachalo puti inzhenera. Moskva, Izd-vo "Znanie," 1962. 31 p. (Novoe v zhizni, nauke, tekhnike. X Seriia: Molodezhnaia, no.19) (MIRA 15:10)
(Railroads—Construction) (Bridges, Concrete)

KOSTYAYEV, P. S., kand. tekhn. nauk

Unheated mortars for sealing precast elements. Transp. stroi. 13 no.3:51-52 Mr '63. (MIRA 16:4)

(Mortar)
(Precast concrete construction—Cold weather conditions)

KOSTYAYEV, P.S., inzh.

Examination of "cold" concrete in structures being used. Transp. stroi. 12 no.3:49-51 Mr '62. (MIRA 16:11)

KOSTYAYEV, Pavel Sergeyevich, kand. tekhn.nauk; MEL'NIKOVA, Zh.M., red.; RAKITIN, I.T., tekhn.red.

[Cold concrete] Kholodnyi beton. Moskva, Izd-vo "Znanie," 1964. 32 p. (Novoe v zhizni, nauke, tekhnike. IV Seriia: Tekhnike, no.4) (MIRA 17:3)

ONUFRIYEV, Timofey Grigor'yevich, dots.; SHATNEV, Boris Nikolayevich, dots.; IVAN'KO, Timofey Yakovlevich, inzh.; GEROL'SKAYA, Lyudmila Sergeyevna, dots.; SARYCHEVA, Nina Petrovna, dots.; KOSTYAYEV, Sergey Petrovich, inzh.[deceased]; YEGOROV,L.P.,dots., retsenzent; ZAYCHENKO,I.R.,dots.,retsenzent; BYALYNITSKIY,V.A.,inzh.,retsenzent; CHERKASHIN,N.A.,inzh.,retsenzent; DYNER,I.I.,inzh.,retsenzent; PAUL', V.P.,inzh.,red.; NEKLEPAYEVA, Z.A.,inzh.,red.; MEDVEDEVA, M.A., tekhn. red.

[Buildings in railroad transportation] Zdaniia na zheleznodorozhnom transporte. Moskva, Transzheldorizdat, 1962. 408 p. (MIRA 15:6)
(Railroads--Buildings and structures)

USSR/Soil Science - Cultivation, Improvement, Erosion. J

Abs Jour : Ref Zhur Biol., No 22, 1958, 100108

Author : Lukin, V.N., Kostyayev, V.M.
Inst : -
Title : Tillage of Boggy Soils Without the Use of a Moldboard.

Orig Pub : Khochagin kishloki Tochikiston. 1957, No 9, 45-47 (tadzh.); S. kh. Tadzhikistana, 1957, No 9, 46-48

Abstract : No abstract.

Card 1/1

KOSTYAYEV, V.M.

Nutrietn requirements of ramie plants on dark Sierozems of the Gissar Valley. Dokl.An Tadzh. SSR 2 no. 5:23-29 '59.
(MIRA 13:12)

1. Tadzhikskiy nauchno-issledovatel'skiy institut sadovodstva imeni I.V. Michurina. Predstavleno akademikom AN Tadzhikskoy SSR P.N. Ovchinnikovym.
(Gissar Valley--Ramie)

KOSTYAYEV, V. M., Cand Agr Sci, "Effectiveness of Mineral Fertilizers under Crops in the Sierozems of Tadzhikistan." Stalinabad, 1960. (Acad Sci TaSSR, Inst of Horticulture, im I. V. Michurin). (KL, 2-61, 215).

KOSTYAYEV, V.M.

Using the leaf-diagnosis method to determine the supply of nitrogen, phosphorus, and calcium in the ramie plant. Dokl. AN Tadzh. SSR 3 no.5:45-47 '60. (MIRA 16:2)

1. Tadzhikskiy nauchno-issledovatel'skiy institut sadovodstva im. I.V. Michurina. Predstavleno chlenom-korrespondentom AN Tadzhikskoy SSR V.F. Petrovym.
(Ramie) (Plants—Nutrition)

BURSEVICH, A.P., kapitan 2-go ranga; KOSTYAYEV, V.V., kapitan-leytenant

From the practice of carrying-out radio deviation work on submarines. Mor. sbor. 47 no.5:63-66 My '64. (MIRA 18:6)

FOMICHEVA, A.S., nauchnyy sotrudnik; AKULOVA, M.F., veterinarnyy vrach; APOLLOSOV, K.A., veterinarnyy vrach; KUSHINA, L.E., veterinarnyy vrach; KOSTYAYEVA, A.A., vrach-bakteriolog (Rostov-na-Donu)

Role of antiphage serum in the diagnosis of brucellosis. Veterinariia 32 no.12:67-68 D '55. (MLRA 9:4)
(BRUCELLOSIS--DIAGNOSIS) (SERUM DIAGNOSIS)

YEGOROVA, L.I.; KOSTYAYEVA, S.I.

Use of some diuretic substances (diamox, chlorurit, hypothiazide) in cardiovascular pathology. Terap. arkh. 35 no.2: 30-37'63. (MIRA 16:10)

1. Iz Tsentral'noy klinicheskoy bol'nitsy (glavnyy vrach A.I.Khrimlyan) IV Glavnogo upravleniya pri Ministerstve zdravookhraneniya SSSR.

(CARDIOVASCULAR SYSTEM—DISEASES)
(DIURETICS AND DIURESIS)

KOSTYCHENKO, Ye.V.

New design of valve joints for depth pumps. Prom.energ. 15 no.3:20 Mr '60. (MIRA 13:6)
(Oil well pumps)

1. KOSTYCHEV, A., ENG.
2. USSR (600)
4. Coal Mines and Mining - Periodicals
7. Serious omissions in the periodical "Ugol'." Za ekon. mat. no. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

S/147/61/000/004/005/021
E161/E435

10.1200

AUTHOR: Kostychev, G.I.

TITLE: Contribution to the problem of the optimum shape of bodies in unstabilized motion

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Aviatsionnaya tekhnika, no.4, 1961, 34-38

TEXT: The author considers a body, taken as a particle, moving in a trajectory defined by Cartesian coordinates (x,y). The "P = mf" type equations of motion are written down in tangential and normal form. Along the line of flight, P is the difference between the thrust and the weight component plus the frontal resistance to motion, the latter term being expressed as the aggregate of all the elemental resistances summed over the body. Normal to the line of flight, P is the difference between the lift force, expressed as an integral taken over the body, and the weight component. The cross-sectional shape of the body is specified by two Cartesian coordinates (ξ, r). With this introduction the problem now considered is the determination of the shape of the body, $r = r(\xi)$, and the parameters defining the

Contribution to the problem ...

motion, e.g. speed, coordinates, so that the velocity u_n at the end of the motion should assume a stationary value. A variational method is used, employing Lagrange multipliers. This leads to a complex equation in which the coefficients of most terms can be made zero, thus leading to just sufficient equations to determine the unknowns. A particular case - when some of the functions introduced assume special forms - leads to simplified conditions. Finally, equations are derived for the shape of the body when the work done during the motion is a minimum, and also when the speed of the body is constant. There is 1 figure.

ASSOCIATION: Kazanskiy aviatsionnyy institut
Kafedra aerodinamiki (Kazan' Aviation Institute
Department of Aerodynamics)

SUBMITTED: March 11, 1961

Card 2/2

KOSTYCHEV, G.I.

Calculating the flow past circular cascades of profiles. Trudy KAI 28:49-60 '54. (MLRA 10:6)

(Airfoils)

Kostychev G.I

124-1957-10-11544

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 10, p 51 (USSR)

AUTHOR: Kostychev, G. I.

TITLE: To the Calculation of Hydrodynamic Cascades (K raschetu gidrodinamicheskikh reshetok)

PERIODICAL: Tr. Kazansk. aviats. in-ta, 1956, Vol 31, pp 23-36

ABSTRACT: The Author determines expressions for the coefficients of a function which transforms conformally the exterior surface of a cascade composed of arbitrarily shaped profiles upon the peripheries of concentric circles lying on an infinite Riemann surface by means of the coefficients of the normal parametric representation of the profile. The relationships can be expressed with any desired degree of accuracy.

I. S. Simonov

Card 1/1

SOV/124-57-8-8761

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 8, p 25 (USSR)

AUTHOR: Kostychev, G. I.

TITLE: Contribution to the Problem of the Flow About at Airfoil (K zadache ob obtekanii krylovogo profilya)

PERIODICAL: Tr. Kazansk. aviats. in-ta, 1956, Vol 31, pp 37-49

ABSTRACT: The author gives a calculation method for the plane-parallel flow of an ideal incompressible fluid about an airfoil of arbitrary form. The airfoil contour is represented in the form of a trigonometric series; all basic hydrodynamic quantities are expressed in terms of the coefficients of that series.

Ya. M. Serebriyskiy

Card 1/1

KOSTYCHEV, G.I.

Shape of bodies having minimum wave resistance. Izv. vys. ucheb. zav.; av. tekh. no.2:9-15 '58. (MIRA 11:6)

1. Kazanskiy aviatsionnyy institut, Kafedra aerodinamiki.
(Airfoils)

SOV/147-58-3-1/18

AUTHOR: Kostychev, G.I.

TITLE: On the Solution of a Variational Problem in Supersonic Flows (K Resheniyu odnoy variatsionnoy zadachi sverkhzvukovykh techeniy)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Aviatsionnaya Tekhnika, 1958, Nr 3, pp 3-7 (USSR)

ABSTRACT: The author has already dealt (Ref.1) with the problem of the optimal shape of the nose of a body of revolution (or a wing) giving a minimum wave drag in a supersonic stream. There are, however, cases when axisymmetrical bodies are subjected to a disturbed flow, e.g. in a multi-stage rocket where the disturbance is caused by the main stage of the rocket. Suppose it is required to determine the shape of a body of revolution having diameters $2r_a$ and $2r_b$ over an axial length X_o (Fig.1.plane r,X) resulting in the minimum wave drag in a supersonic stream as defined by the parameters of Eq.1, where $f_i(X,\psi)$ are given continuous function,s determined everywhere in the flow upstream starting with the characteristic (of the first family) ad originating at a (Fig.2), in the plane (X,ψ) in which ψ is the stream

Card 1/5

On the Solution of A Variational Problem in Supersonic Flows

function. Let $\varphi(\psi)$ be the unknown function giving the main shock wave originating at a, then, because of the shock, the flow in the triangle acd changes. With the notation of Ref.1, the wave drag of the segment ab is given by Eq.3, where L is the contour based on the segment ab. Assume now as the contour L the curve acb (Fig.2) consisting of the shock ac and the characteristic (of the second family) bc originating at b. Eq.3, is valid also in the case when the functions of the gas dynamics have discontinuities in the region of integration, hence Eq.3 can be integrated along ac by taking the left limits of the functions involved. The integral along ac being

$$\int_0^{\psi_c} \left[X_1(\varphi,\psi) + \varphi'(\psi)X_2(\varphi,\psi)\right] d\psi$$

and that along bc being (as shown in Ref.1 and 2)

$$\int_0^{\psi_b} v(\alpha) \left[1/X \sin\alpha \sin(\beta-\alpha) - \cos\beta\right] d\psi$$

The total wave drag of the segment ab is given by Eq.4 and the length of the sought body of revolution is given by Eq.6. The function $\varphi(\psi)$ may be expressed in terms of

Card 2/5

On the Solution of a Variational Problem in Supersonic flows

properties of the incident stream and of the angle of the tangent to the shock wave in the physical plane (X,Γ), this angle given by Eq.7. Taking into account the standard relations through the shock wave as expressed by the next three equations and the relation 7, we can now obtain expressions as given in Eq.8 and 9 and these finally lead to Eq.10. Along characteristics of the second family there are two non-holonomic relations: Equations 11 and 12. Thus we arrive at the following variational problem: with the given parameters of the incident stream (Eq.1) and the given magnitudes Γ_a, Γ_b and X_0 we have to determine the functions $\alpha(\psi)$, $\beta(\psi)$, $\gamma(\psi)$ and $\varphi(\psi)$ giving the minimum wave drag (Eq.4) with the constant length X_0 (Eq.10) and non-holonomic relations of Eq.11 and 12. For the cases when the shock is attached and there are no shocks or rarefaction waves inside the triangle abc and on the assumption that the speeds along the characteristic remain supersonic throughout then, in accordance with the methods described by the author (Ref.1) and Shmyglevs'kiy (Ref.2), four relations are obtained as given by Eq.14, in which

On the Solution of a Variational Problem in Supersonic Flows

λ and μ are respectively the constant and the variable multipliers of Lagrange. The lower indices denote partial derivatives with respect to the pertinent variables. With the use of the first three of these relations the fourth one can be transformed to read as in Eq.15. These four equations together with Eq.11 will enable us to determine the five functions α, β, γ, φ and μ. Equ.15 is of the second order with respect to φ, hence the general solution of the system will contain four arbitrary constants which can be determined by the given magnitudes γ_a, γ_b, X_o with the help of Eq.13 and by the two boundary conditions at the free end ($\psi = \psi_c$) which can be obtained from the general form of the first

On the Solution of a Variational Problem in Supersonic Flows

variational relation as indicated by the last two equations. There are 2 figures and 2 Soviet references.

ASSOCIATION: Kazanskiy Aviatsionnyy Institut, Kafedra Aerodinamiki (Kazan' Institute of Aeronautics, Chair of Aerodynamics)

SUBMITTED: 19th February 1958.

SOV/124-59-9-9884

Translation from: Referativnyy zhurnal, Mekhanika, 1959, Nr 9, p 45 (USSR)

AUTHOR: Kostychev, G.I.

TITLE: The Potential Flow Around Two Bodies by a Plane Stream of an Incompressible Liquid

PERIODICAL: Tr. Kazansk. aviats. in-ta, 1958, Vol 33 - 34, pp 3 - 6

ABSTRACT: To solve the problem the author recommends to map at first the exterior of one of the bodies onto a semiplane, and then to analyze the flow around the profile, which is near the plane boundary. The author does not present examples of calculations in his article.

G.Yu. Stepanov

Card 1/1

10.2000
~~10(4),16(1)~~

67060

SOV/44-59-9-9007

Translation from: Referativnyy zhurnal.Matematika,1959,Nr 9,p 69 (USSR)

AUTHOR: Kostychev,G.I.

TITLE: On the Construction of Grids According to a Given Velocity Distribution [Part of the Dissertation Maintained in 1952]

PERIODICAL: Tr.Kazansk.aviats.in-ta,1958,33-34,7-18

ABSTRACT: Let a grid with straight axes consist of infinitely many congruent profiles and let it be in the potential flow of an incompressible fluid. The author considers the determination of such a grid from the velocity of flow given as a function of the profile arc on the profile. The conditions of the problem permit to determine the absolute value of the derivative of the complex potential W as a function of the boundary point of an infinitely connected domain of the W-plane which corresponds to the external region of the sought grid. The mentioned domain of the W-plane is also a grid consisting of rectilinear lines; the parameters of this grid are determined from the conditions of the problem. In this manner the real part $\ln \frac{dW}{dz}$ on the boundary of the infinitely connected domain is known. For the determination of $\ln \frac{dW}{dz}$ the author maps the exterior of the grid in the W-plane onto the exterior of concentric unit circles lying on

Card 1/3

On the Construction of Grids According to a Given Velocity Distribution
[Part of the Dissertation Maintained in 1952]

a Riemannian surface of infinitely many sheets in the ζ-plane; the mapping function is

$$W = \frac{t_1}{2\pi}\left[e^{-i\alpha_1}\ln\frac{R+\zeta}{R-\zeta} + e^{i\alpha_1}\ln\frac{R\zeta+1}{R\zeta-1}\right],$$

where t_1 is the path, α_1 - the decision of the grid in the W-plane and the parameter R is determined from a certain transcendent equation. In this manner $\ln\frac{dW}{dz}$ is determined as a function of ζ by an integral of Schwarz.

In the papers of other authors on this question the analytic function $\ln\frac{dW}{dz}$ was determined immediately in the infinitely connected domain of the W-plane; that caused large computing difficulties, since elliptic functions were applied.

In an analogous manner the grid is found which consists of m congruent profiles lying symmetrically around the coordinate origin; here the velocity distribution is given and in the coordinate origin there lies a system consisting of the vortex Γ and the source Q. In this case the domain which corresponds to the flow in the plane W is mapped onto the

10(4),16(1)

67060
SOV/44-59-9-9007

On the Construction of Grids According to a Given Velocity Distribution [Part of the Dissertation Maintained in 1952]

exterior of concentric unit circles on the m-sheeted surface of the plane ζ by the function

$$W = \frac{Q-i\Gamma}{2\pi m} \ln \frac{R+\zeta}{R-\zeta} + \frac{Q+i\Gamma}{2\pi m} \ln \frac{R\zeta+1}{R\zeta-1} - \frac{\Gamma}{2\pi i} \frac{\zeta-R}{R\zeta-1} + c .$$

In this case the function $\ln \frac{dW}{dz}$ has logarithmic singularities in the points $\zeta = \pm R$ and for the determination of it one is compelled to use a formula being a generalization of the formula of Iensen and the integral of Schwarz.

V.S. Rogozhin

Card 3/3

85919

10.9000

S/124/60/000/009/001/005
A005/A001

Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 9, pp. 41-42, # 11418

AUTHOR: Kostychev, G.I.

TITLE: The Formation of the Wing Profile According to the Distribution Diagram of Velocity or Pressure Over the Chord

PERIODICAL: Tr. Kazansk. aviats. in-ta, 1958, Vol. 38, pp. 3-21

TEXT: If $W(\zeta)$ is the complex potential in the ζ-plane, and

$$(\zeta) = a\zeta + \sum_{n=0}^{\infty} a_n \zeta^{-n} \qquad (1)$$

is a function conformally mapping the exterior of the unit circle of the ζ-plane onto the exterior of the profile in the ζ-plane, and

$$\overline{v} = \frac{dW}{d\zeta}\frac{d\zeta}{dz}, \quad \text{then} \quad \frac{dz}{d\zeta}\frac{dz}{d\zeta}v^2 = \frac{dW}{d\zeta}\frac{d\overline{W}}{d\zeta}$$

where $\overline{v}$ is the conjugate velocity.

Card 1/3

The Formation of the Wing Profile According to the Distribution Diagram of Velocity or Pressure Over the Chord

Therefore, if the value of velocity on the profile contour is prescribed in the form $v^2 = F(x)$, the problem of the determination of the stream and its boundaries is reduced to the determination of the function $z(\zeta)$ regular everywhere within the region $|\zeta| \geqslant 1$, having a simple pole in the infinity, and satisfying on the boundary $|\zeta| = 1$ the condition

$$z'\bar{z}'F\left(\frac{z+z}{2}\right) = W'\bar{W}, \quad (\zeta = e^{i\theta}). \tag{2}$$

The solution of the more general problem of determining $z(\zeta)$, satisfying the same conditions but having boundary condition in the form

$$z'\bar{z}'\left[f_0\left(\frac{z+\bar{z}}{2}\right) + \lambda f\left(\frac{z+\bar{z}}{2}\right)\right] = \psi(\theta, \alpha) \tag{3}$$

where $0 \leq \lambda \leq \lambda_0$, is presented in the first three paragraphs of the article. It is assumed that the solution of Eq. (3) is known for $\lambda = 0$ in the form $z = z_0(\zeta)$, and that the solution of Eq. (3) for $\lambda = \lambda_0$ goes over into the solution of Eq. (2). Assuming that $z(\zeta, \lambda) = z_0(\zeta) + \lambda z_1(\zeta) + \lambda^2 z_2(\zeta) + \ldots$, and presenting

Card 2/3

85919

3/124/60/000/009/001/005
A005/A001

The Formation of the Wing Profile According to the Distribution Diagram of Velocity or Pressure Over the Chord

the right-hand part of Eq. (3) in the vicinity of $\lambda = 0$ by a series in powers of λ, the system of differential equations can be obtained for determining the unknown functions $z_n(\xi)$ by comparing the coefficients at λ of equal powers. The conditions are considered for which the solution can be found in the class of functions univalent in the vicinity of the infinitely remote point; the convergence of the successive approximation process is shown, and the considerations are presented which simplify the application of the formulae obtained. It is shown that the second approximation gave already practically suitable results for one of the theoretical profiles, which is similar to the NACA-230-11 profile. There are 5 references.

A.I. Borisenko

Translator's note: This is the full translation of the original Russian abstract.

Card 3/3

10.1200
10.1230

S/147/62/000/001/002/015
E195/E435

AUTHORS: Kostychev, G.I., Polkovnikov, V.I.

TITLE: Some variational problems in gas dynamics for motions other than steady-state

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Aviatsionnaya tekhnika. no.1, 1962, 11-18

TEXT: Many papers exist which deal with the determination of optimum values of missile design parameters, but which are applicable only to steady-state conditions. The solutions thus obtained do not apply to non-steady states which characterize the conditions during actual flight. In a previous paper (Ref.1: Ibid, no.4, 1961) the author dealt with such problems, where aerodynamic characteristics were in the form

$$Q = \int_0^1 \varphi[u_i(t),\ r_j(\xi)]\,d\xi \qquad \begin{pmatrix} i = 1, \dots n \\ j = 1, \dots m \end{pmatrix}. \qquad (0.1)$$

and the equation of motion

$$\int_0^1 f_k(u_i, r_j)\,dt = 0, \qquad (0.2)$$

Card 1/5

where $u_i(t)$ - control functions connected with the motion of the missile (speed, mass etc); $r_j(\xi)$ - functions which are independent of time which characterize the constructional data of the missile; (ξ [01] - connected with construction of the coordinate). This article is devoted to the consideration of the influence of motion regime on the optimum shape of a missile and some generalization of the problems formulated in the previous work. Starting from the Euler-Lagrange equations for several variables and defining a pressure coefficient for the head of solid of revolution

$$c_p = \alpha_1 r'^2 \left[1 + \beta_1 \left(\frac{a}{vr'}\right)^{3/2}\right]. \quad (1.1)$$

and

$$Q = \alpha_1 \pi \rho v^2 \int_0^1 \left[1 + \beta_1 \left(\frac{a}{vr'}\right)^{3/2}\right] r r'^2 \, d\xi. \quad (1.2)$$

where α_1 and β_1 - constant coefficients; v and a - velocity and velocity of sound of the free stream; r' - tangent of the angle of the tangent to a point on the surface of the body, the authors derive in a parametric form the equations of the body profile

$$r = \frac{c}{p^6 + \delta p^3}, \tag{1.8}$$

$$\xi = c\left\{\frac{3}{5\delta p^5} + \frac{p}{\delta^2(p^3+\delta)} + \right.$$

$$\left. + \frac{1}{\sigma^{8/3}}\left[\frac{1}{3}\ln\frac{(p+\sqrt[3]{\sigma})^3}{p^3+\sigma} + \frac{2}{\sqrt{3}}\operatorname{arc\,tg}\frac{p\sqrt{3}}{2\sqrt[3]{\sigma}-p}\right]\right\} + c_1. \tag{1.9}$$

where $p^2 = r'$. For a given law of motion $v = f(t)$, the parameter σ is known and the arbitrary constants c and c_1 are determined by the boundary conditions $r(0) = r_0$, $r(1) = r_1$. In transition from one regime to another the body profile will change because of variation in σ. With velocity constant

Card 3/6

Some variational problems ...

$v = f(t) = v_o$, then

$$\sigma = \frac{\beta}{4} v_o^{-3/2} = \frac{\beta_1}{4} M_o^{-3/2}$$

With a given law of resistance, for every motion regime, same optimum body profile may be obtained by a judicious selection of "mean" velocity

$$v_{cp}^{3/2} = \frac{\int_0^T [f(t)]^{3/2} dt}{\int_0^T [f(t)]^{3/2} dt}.$$

The plot of the body profiles of solids of revolution, in accordance with laws: $M_1 = 25t + 5$ and $M_2 = (153.15t^3 + 11.18)^{2/3}$ is shown in Fig.2 (r vs ξ , parabola) these profiles will be

Card 4/6

Some variational problems ...

optimum for a motion with constant Mach numbers $M_{1\ mean} = 22.09$, $M_{2\ mean} = 19.69$. In this example the nose and transition to the cylindrical section are not included. The authors extend the method to the problem of vertical flight, in particular the determination of optimum body profile for given initial and final velocities, so that maximum vertical rise is achieved. They conclude by considering the case of a single missile subject to flying regimes of varying relative frequency. There are 2 figures.

ASSOCIATION: Kazanskiy aviatsionnyy institut, Kafedra aerodinamiki
(Kazan' Aviation Institute, Department of Aerodynamics)

SUBMITTED: April 11, 1961

Card 5/6

39776

S/147/62/000/002/004/020
E031/E435

AUTHOR: Kostychev, G.I.

TITLE: On optimal programming when there are different conditions for the realization of a process

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Aviatsionnaya tekhnika, no.2, 1962, 23-31

TEXT: It may happen that the same unit can operate under different conditions but to change the programme of certain of the components which determine the flight regime is inconvenient or impossible. Moreover the operating conditions may not be known in advance and may only be given in statistical terms. In this paper the necessary and sufficient conditions are derived for an extreme value "in the mean" at the end of the interval of motion of some chosen quantity for different regimes. It is assumed that there is a vector function $u\,[u_i(t)]$ $(i = 0,1,\ldots,n)$ whose components are functions of some argument t in the range OT describing the motion, which satisfies a system of ordinary first order differential equations. The problem is to determine

Card 1/2

u so that one of its components takes a stationary value at t = T. The problem is generalized to q regimes, each described by vector functions $v[v_j(t)]$ (j = 1,2 ... m) and $u^s[u^s_i(t)]$ (s = 1,...,q) (i = 0,1 ... n), where v(t) has the same value for all motions and $u^s(t)$ takes different values for each regime. A further generalization is to the case when there is a continuous spectrum of regimes depending on some parameter p; i.e. each flight regime is characterized by vector functions u(t,p) and v(t). In this case the problem is to determine the optimum programme for v. This problem may be generalized to the case where there are several programmes v, each depending on a parameter p (the range for p being possibly different in each case). For each of the above problems the Euler-Lagrange variational equations are derived. The theory may be extended to problems in which the ends of the interval are not fixed or in which the boundary conditions have a different form. The functional whose extremum is sought may also be more complicated.

ASSOCIATION: Kazanskiy aviatsionnyy institut, Kafedra aerodinamiki
Kazan' Aviation Institute, Department of Aerodynamics)

SUBMITTED: July 17, 1961

KOSTYCHEV, G.I.

Optimal programming in case of various conditions for the realization of a process. Izv.vys.ucheb.zav; av.tekh. 5 no.2:23-31 '62. (MIRA 15:7)

1. Kazanskiy aviatsionnyy institut, kafedra aerodinamiki.
(Airplanes—Handling characteristics)

KOSTYCHEV, G.I.

Some variational problems on approaching and interaction. Izv.-vys.uchab.zav.; av.tekh. 5 no.3:25-33 '62. (MIRA 15:9)
(Calculus of variations) (Mechanics, Analytic)

KOSTYCHEV, G.I.

Necessary extremum conditions for a variational problem with a sitributed parameter. Izv. vys. ucheb. zav., av. tekh. 6 no.2: 124-133 '63. (MIRA 16:8)

(Calculus of variations)

ACCESSION NR: AP3004731 S/0147/63/000/002/0124/0133

AUTHOR: Kosty*chev, G. I.

TITLE: Necessary extremal conditions for one variational problem with a distributed parameter.

SOURCE: IVUZ. Aviats. tekhnika, no. 2, 1963, 124-133

TOPIC TAGS: variational calculus, programming, optimal programming, optimal process programming, Weyerstrass condition, Legendre condition, Jacobi condition, Jacobian condition

ABSTRACT: With reference to the author's paper in Aviatsionnaya tekhnika, no. 2, 1962, in which problems of the optimal programming of processes depending on a single scalar parameter were examined, the present theoretical paper employs generalizations of well-known theorems of classical variational calculus for the case of a functional with a distributed parameter to derive further indispensable conditions for the existence of an extremal value of a given problem. The paper establishes the theorem of the implicit functions, the indispensable conditions of extremal solutions, the necessary Weyerstrass and Legendre conditions, and the necessary Jacobian condition. The following Jacobian theorem is demonstrated:

Card 1/2

L 29128-65 EWT(d) Pg-4 IJP(c)

ACCESSION NR: AP5005528 S/0147/65/000/001/0003/0006

AUTHOR: Kostyrchev, G. I. 24

TITLE: Systems interacting with finite signal propagation rate B

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 1, 1965, 3-6

TOPIC TAGS: differential equation, calculus of variations, signal propagation

ABSTRACT: The author investigates the problem of determining vector-functions $U(\tau, t)$, $x(t)$, $a(t)$, $b(t)$, $w(t)$, $v(t)$ and $\delta(t)$ such that the system

$$F\left(U, \frac{\partial U}{\partial \tau}, x, \tau\right) = 0, \quad (1)$$

$$\frac{da(t)}{dt} - v(a(t)) = 0, \quad (2)$$

$$b(t) = 0, \ t \in [t_0, \bar{t}_1], \quad (3)$$

$$a(t) - \psi(x, b) = 0, \quad (4)$$

$$a(t_0) = 0, \quad (5)$$

$$f(x, \dot{x}, w, t) = 0, \quad (6)$$

Card 1/2

L 29128-65

ACCESSION NR: AP5005528

$$g(x, v, t) = 0; \qquad (7)$$

is satisfied and an extremum is achieved by the quantity $b(T + \sigma(T))$ for the given values

$$a(T) = a_T, \; x(0) = x_0, \; x(T) = x_T; \qquad (8)$$

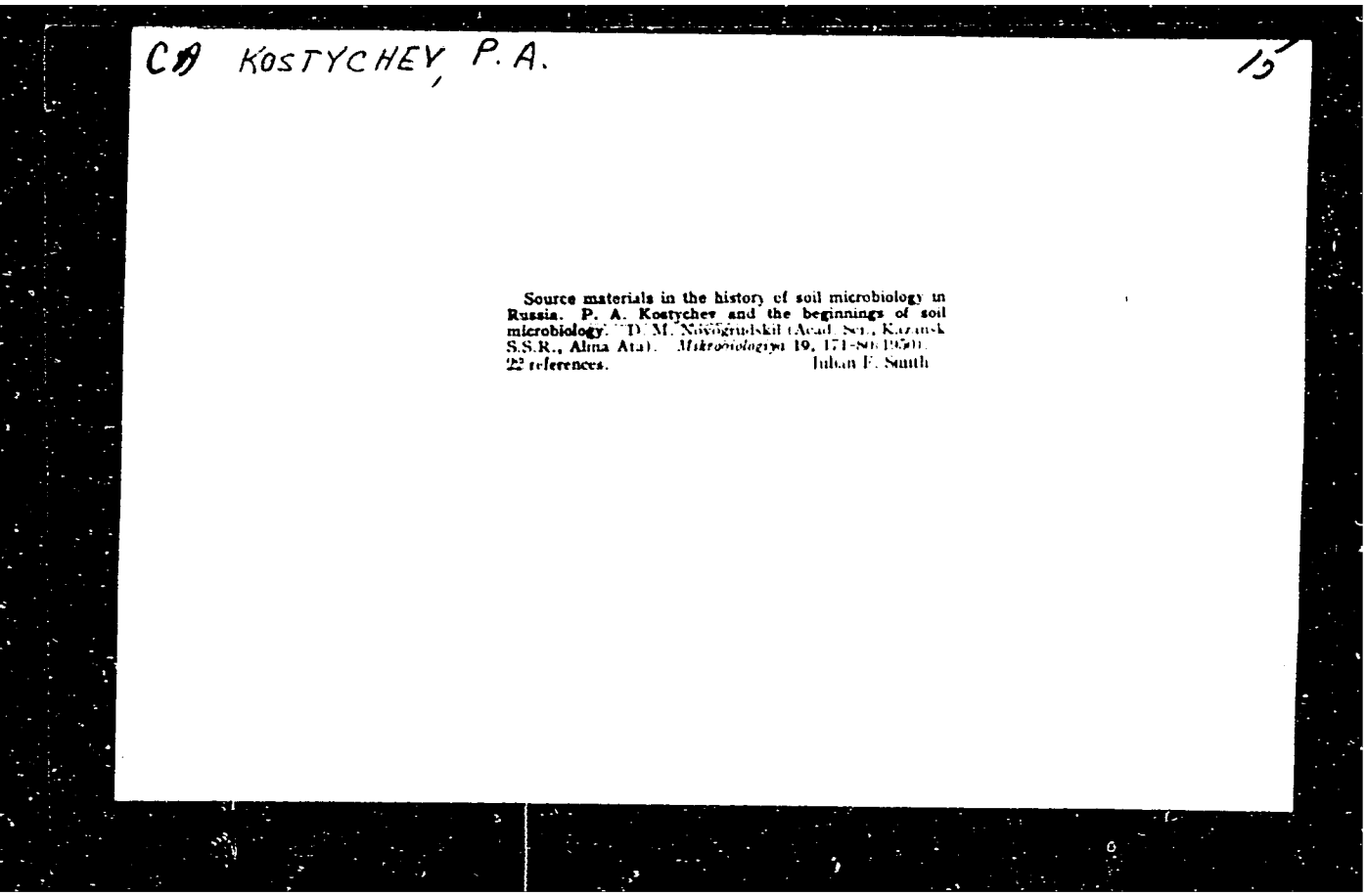
He obtains a system of equations which are similar to classical ones but for which analytic solutions are much more difficult to obtain. He succeeds in obtaining an analytic solution only for some very simple examples of an academic nature. Orig. art. has: 15 formulas.

ASSOCIATION: none

SUBMITTED: 07Apr64 ENCL: 00 SUB CODE: MA

NO REF SOV: 002 OTHER: 000

Card 2/2



CA KOSTYCHEV, P. A. 15

Source materials in the history of soil microbiology in Russia. P. A. Kostychev and the beginnings of soil microbiology. [D. M. Novogrudskii (Acad. Sci., Kazakh S.S.R., Alma Ata).] *Mikrobiologiya* 19, 171-80 (1950). 22 references. Julian F. Smith

KOSTYCHEV, P.A.

geo (2)

Meteorological Abst.
Vol. 4 No. 2
Feb. 1953
Aqueous Vapor and
Hydrometeors

4.2-222 551.579.5

Kostychev, P. A. O bor'be s zasukhami v chernozemnoi oblasti posredstvom obrabotki polei i nakopleniia na nikh snega. [The struggle against droughts in the chernozem regions by field cultivation and snow conservation.] (In: Akademiia Nauk SSSR. Institut Fiziologii Rastenii im. KA. Timiriazeva. Klassiki russkoi agronomii v bor'be s zasukhoi. [Classics of Russian agronomy in their fight against drought.] Moscow, 1951. p. 171-236. tables.) DLC—The individual chapters constitute lectures delivered by the author in 1892. They are: "Preliminary considerations on some properties of chernozem, etc. and seasonal moisture regime"; "Types of soil water that are useful and useless for plants; means for accumulating snow on fields"; "Various characteristics of chernozem during cultivation and their significance; the characteristics of chernozem upon which the drying out of the soil depends during plant growth, etc." *Subject Headings:* 1. Soil moisture 2. Drought prevention.—*I.L.D.*

KOSTYCHEV, P. S. (Engineer)

"Anisotropy of External Friction." Thesis for degree of Cand. Technical Sci. Sub 12 Jun 50, Moscow Order of Labor Red Banner Steel Inst imeni I. V. Stalin.

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

SOV/137-57-10-19031

Translation from Referativnyy zhurnal Metallurgiya 1957, Nr 10, p 85 (USSR)

AUTHORS: Kostychev, P.S., Salida, G.P., Shevchenko, G.I.

TITLE: Experimental Determination of the Rate of Motion of Metal in the Contact Area in Strip Rolling (Eksperimental'noye opredeleniye skorosti dvizheniya metalla v ochage deformatsii pri prodol'noy prokatke)

PERIODICAL: Nauchn. zap. L'vovsk. politekhn in-t. 1956, Nr 36, pp 105-111

ABSTRACT: Determination of the angle of bite may be made in accordance with equations including the values of the speed (S) of the ends of the strip being rolled (on entry or exit) or in accordance with an equation for which the angle of friction has to be known. Since satisfactory methods of determining the coefficient of friction are not yet known, the former group of equations has to be recognized as the more reliable. But with this method, too, determination of the S of the strip is also inaccurate. The problem of the two concepts of the nature of the distribution of S in the contact area is examined - that which holds that S is uniform throughout the thickness and that which holds that S is nonuniform if the zone of adhesion is borne in mind. In order to study the kinematics of the rolling process the authors have developed a special instrument which permits experimental determination of the S of motion of the

Card 1/2

Experimental Determination of the Rate of Motion of Metal (cont.)

metal through the contact area. This instrument converts the displacement of a reference point into changes in current, which are recorded on a vibrating-oscilloscope film. To do this, two slide wires, enclosed in a symmetrical measuring bridge, the slides of which are in mechanical contact with a point in the specimen, are employed. The entire instrument is mounted on a bracket that is mounted to the table of the rolling mill. Mechanical contact between the slides and a point on the specimen is effected by a thin steel wire, one end of which is connected to the point on the specimen and the other to the roll surface. If the S of the point on the specimen and on the roll surface are identical, the slides, joined to the steel wire by means of a special device, are not displaced. Change in the S of the point on the specimen relative to the peripheral S of the rolls causes the slides to move, and this is recorded on the oscillograph. Calculations show that the current in the gage is proportional to the increase in the path of the point under investigation. The instrument showed itself to be of adequate sensitivity and convenience in operation. An oscillogram of change in the S of displacement of one of the points of a Pb specimen rolled on a mill with rolls of 115 mm diameter is presented by way of illustration.

V.O.

Card 2/2

B/137/61/000/012/085/149
A006/A101

AUTHORS: Kostychev, P.S., Shevchenko, G.I., Salida, G.P.

TITLE: A new method of determining elastic flattening of rolling mill rolls

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 12, 1961, 19, abstract 12D127 ("Tr. Konferentsii po avtomat. kontrolyu i metody elektr. izmereniy, 1959", Novosibirsk, Sib. otd. AN SSSR, 1961, 353 - 355)

TEXT: A new method was developed to measure the elastic flattening of rolls during the rolling process. Wire strain gauges are employed as converters for the measurements. Curves are submitted for the first time which characterize flattening of the rolls during rolling and are recorded with the aid of an oscillograph.

N. Yudina

[Abstracter's note: Complete translation]

Card 1/1

tion zone, the pin 4, pressed by the rolled metal presses and bends the plate 3. The magnitude of this bend of plate 3 is proportional

Card 1/3

The use of wire tension gauges for ...

to the pressure of the rolled metal transmitted to it by pin 4. The pressure translator used was a tension-gauge, glued on to the plate and making part of a bridge circuit. There are 2 figures and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Institut avtomatiki i elektrometrii SO AN SSSR, Novosibirsk (Novosibirsk Institute of Automation and Electrical Measurements of the Siberian Branch of the AS USSR)

Card 2/3

The use of wire tension gauges for ...

Fig. 1.

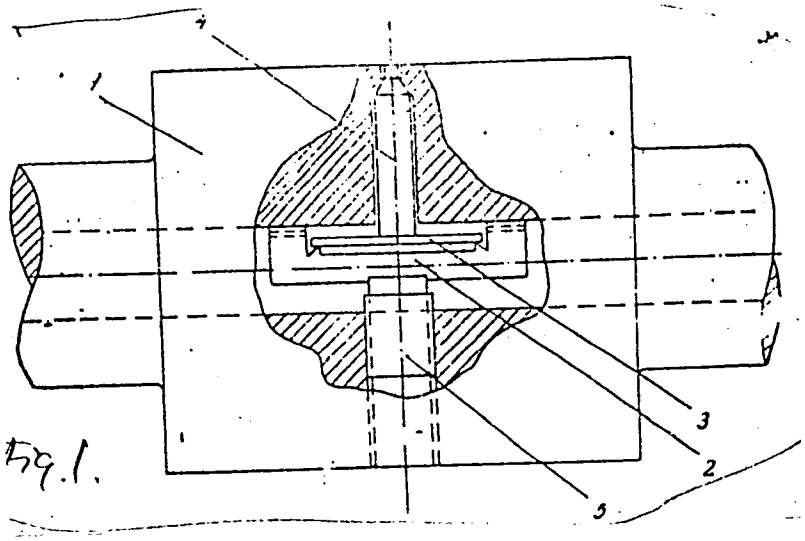
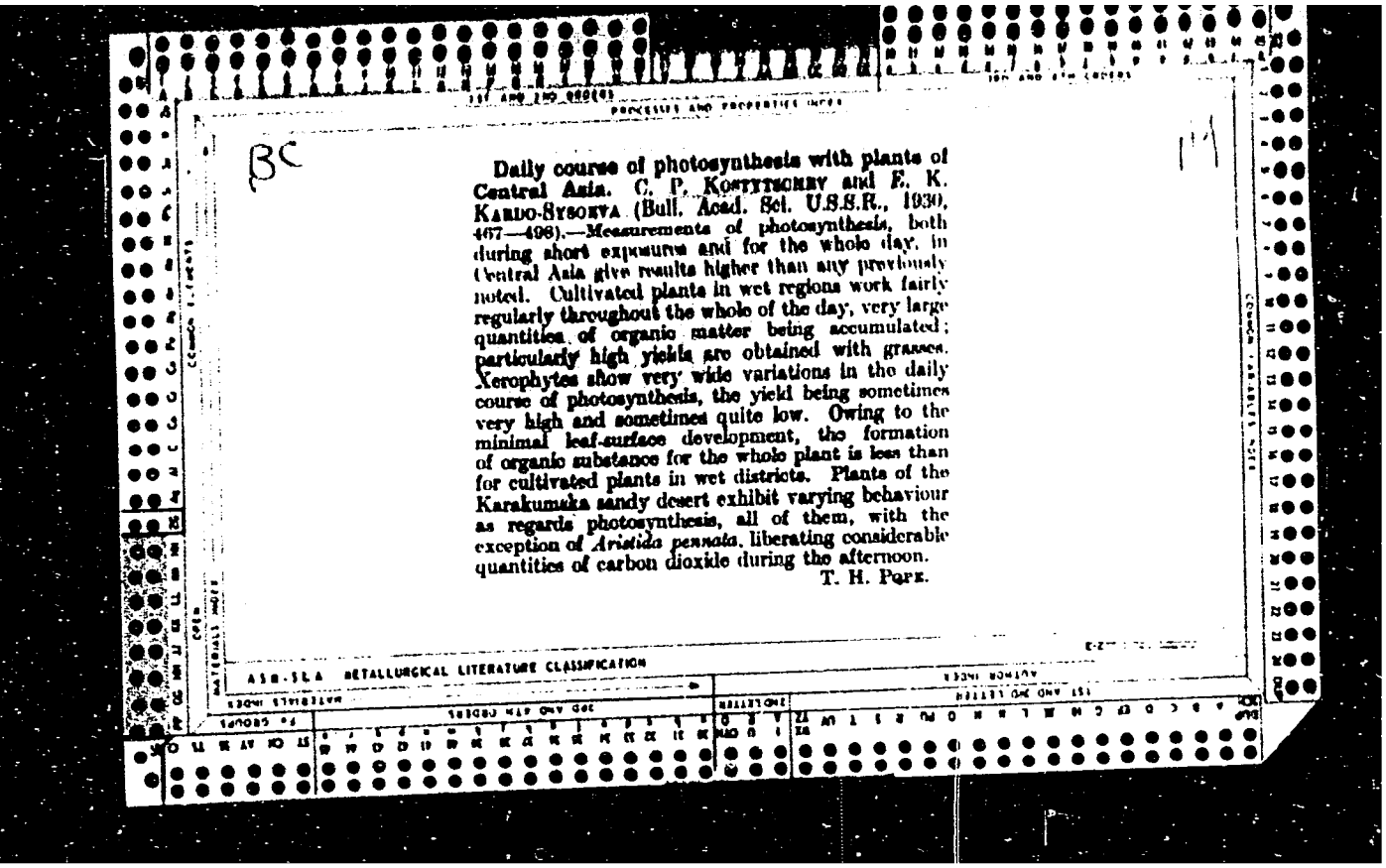


Fig. 1.

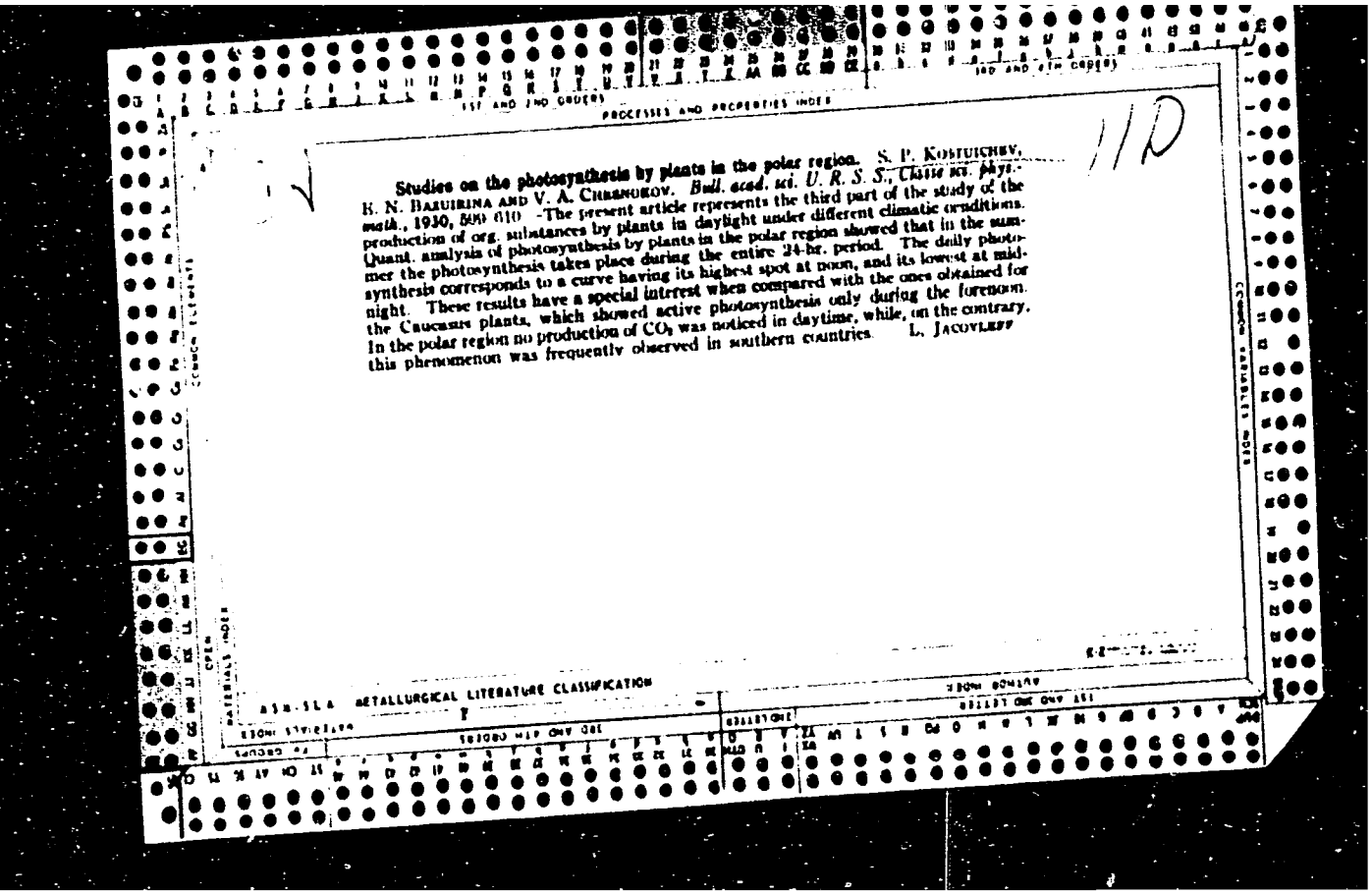
Card 3/3



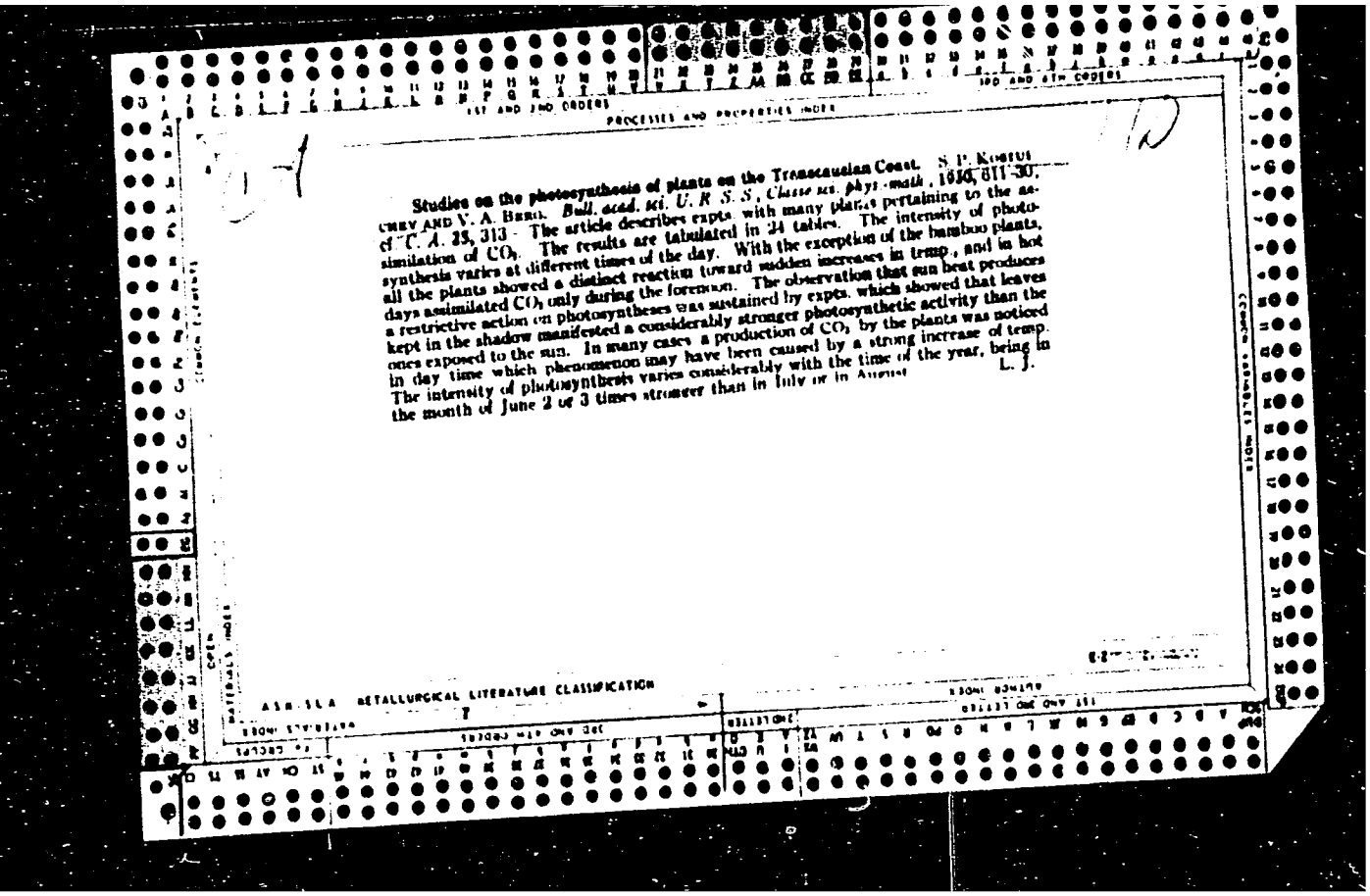
BC

Daily course of photosynthesis with plants of Central Asia. C. P. Kostytschev and E. K. Kardo-Sysoeva (Bull. Acad. Sci. U.S.S.R., 1930, 467—498).—Measurements of photosynthesis, both during short exposures and for the whole day, in Central Asia give results higher than any previously noted. Cultivated plants in wet regions work fairly regularly throughout the whole of the day, very large quantities of organic matter being accumulated; particularly high yields are obtained with grasses. Xerophytes show very wide variations in the daily course of photosynthesis, the yield being sometimes very high and sometimes quite low. Owing to the minimal leaf-surface development, the formation of organic substance for the whole plant is less than for cultivated plants in wet districts. Plants of the Karakumaka sandy desert exhibit varying behaviour as regards photosynthesis, all of them, with the exception of *Aristida pennata*, liberating considerable quantities of carbon dioxide during the afternoon.

T. H. Pope.



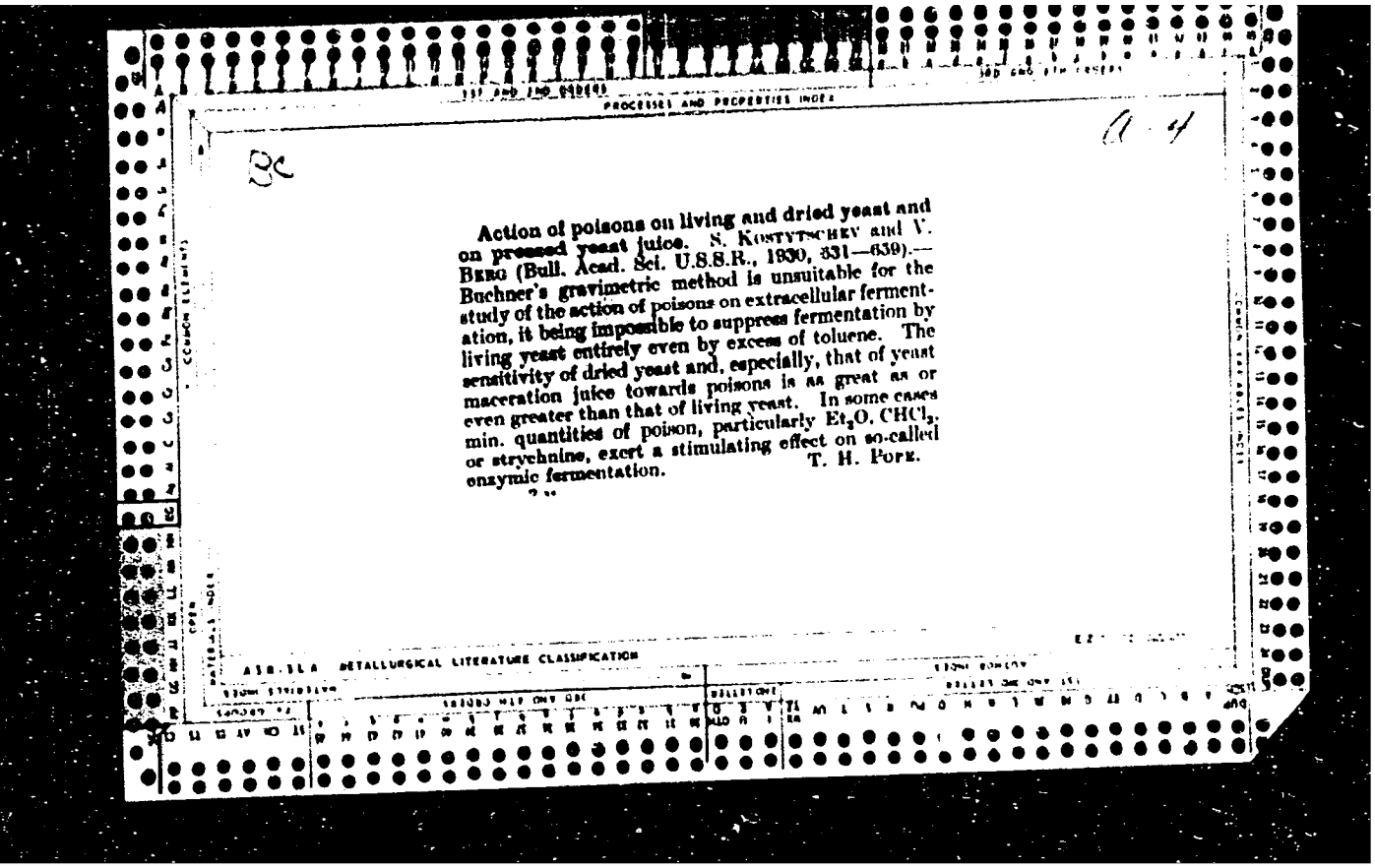
Studies on the photosynthesis by plants in the polar region. S. P. Kostytchev, B. N. Bazhirina and V. A. Chrabrov. *Bull. acad. sci. U. R. S. S., Classe sci. phys.-math.*, 1930, 599-610. -The present article represents the third part of the study of the production of org. substances by plants in daylight under different climatic conditions. Quant. analysis of photosynthesis by plants in the polar region showed that in the summer the photosynthesis takes place during the entire 24-hr. period. The daily photosynthesis corresponds to a curve having its highest spot at noon, and its lowest at midnight. These results have a special intrerest when compared with the ones obtained for the Caucasus plants, which showed active photosynthesis only during the forenoon. In the polar region no production of CO_2 was noticed in daytime, while, on the contrary, this phenomenon was frequently observed in southern countries. L. Jacovleff



PROCESSES AND PROPERTIES INDEX

Studies on the photosynthesis of plants on the Transcaucasian Coast. S. P. Kostyuk, Chrev and V. A. Bard. *Bull. acad. sci. U. R. S. S., Classe sci. phys.-math.*, 1936, 611-30; cf. *C. A.* 25, 313. The article describes expts. with many plants pertaining to the assimilation of CO_2. The results are tabulated in 24 tables. The intensity of photosynthesis varies at different times of the day. With the exception of the bamboo plants, all the plants showed a distinct reaction toward sudden increases in temp., and in hot days assimilated CO_2 only during the forenoon. The observation that sun heat produces a restrictive action on photosyntheses was sustained by expts. which showed that leaves kept in the shadow manifested a considerably stronger photosynthetic activity than the ones exposed to the sun. In many cases a production of CO_2 by the plants was noticed in day time which phenomenon may have been caused by a strong increase of temp. The intensity of photosynthesis varies considerably with the time of the year, being in the month of June 2 or 3 times stronger than in July or in August. L. J.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



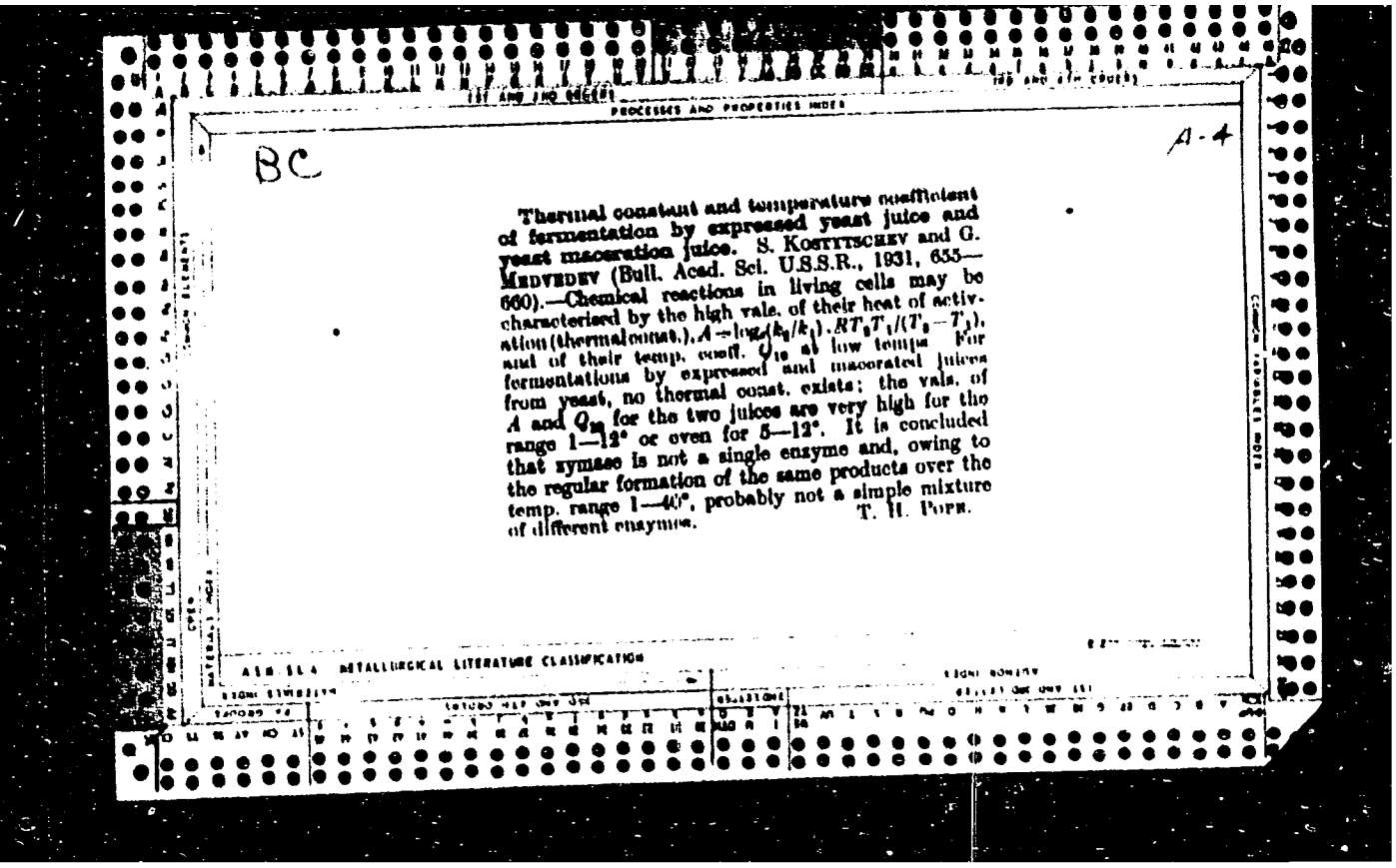
PROCESSES AND PROPERTIES INDEX

Action of poisons on living and dried yeast and on pressed yeast juice. S. KOSTYTSCHEV and V. BERG (Bull. Acad. Sci. U.S.S.R., 1930, 631—639).—Buchner's gravimetric method is unsuitable for the study of the action of poisons on extracellular fermentation, it being impossible to suppress fermentation by living yeast entirely even by excess of toluene. The sensitivity of dried yeast and, especially, that of yeast maceration juice towards poisons is as great as or even greater than that of living yeast. In some cases min. quantities of poison, particularly Et_2O, $CHCl_3$, or strychnine, exert a stimulating effect on so-called enzymic fermentation. T. H. POPE.

A38-51A METALLURGICAL LITERATURE CLASSIFICATION

KOSTYCHEV, S. P.

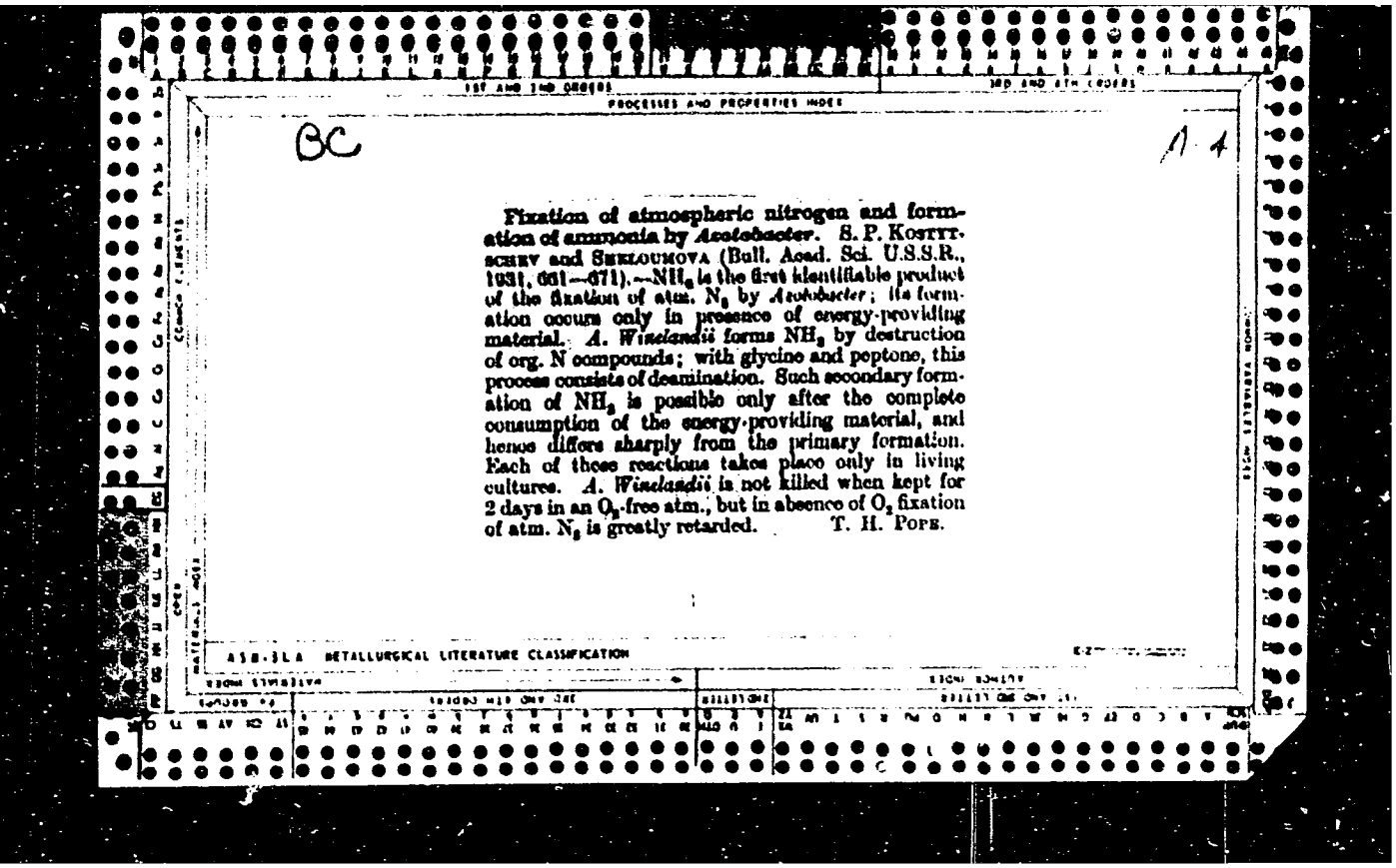
"O poyavlenii zhizni na semle (The Appearance of Life on Earth), 1931



BC

A-4

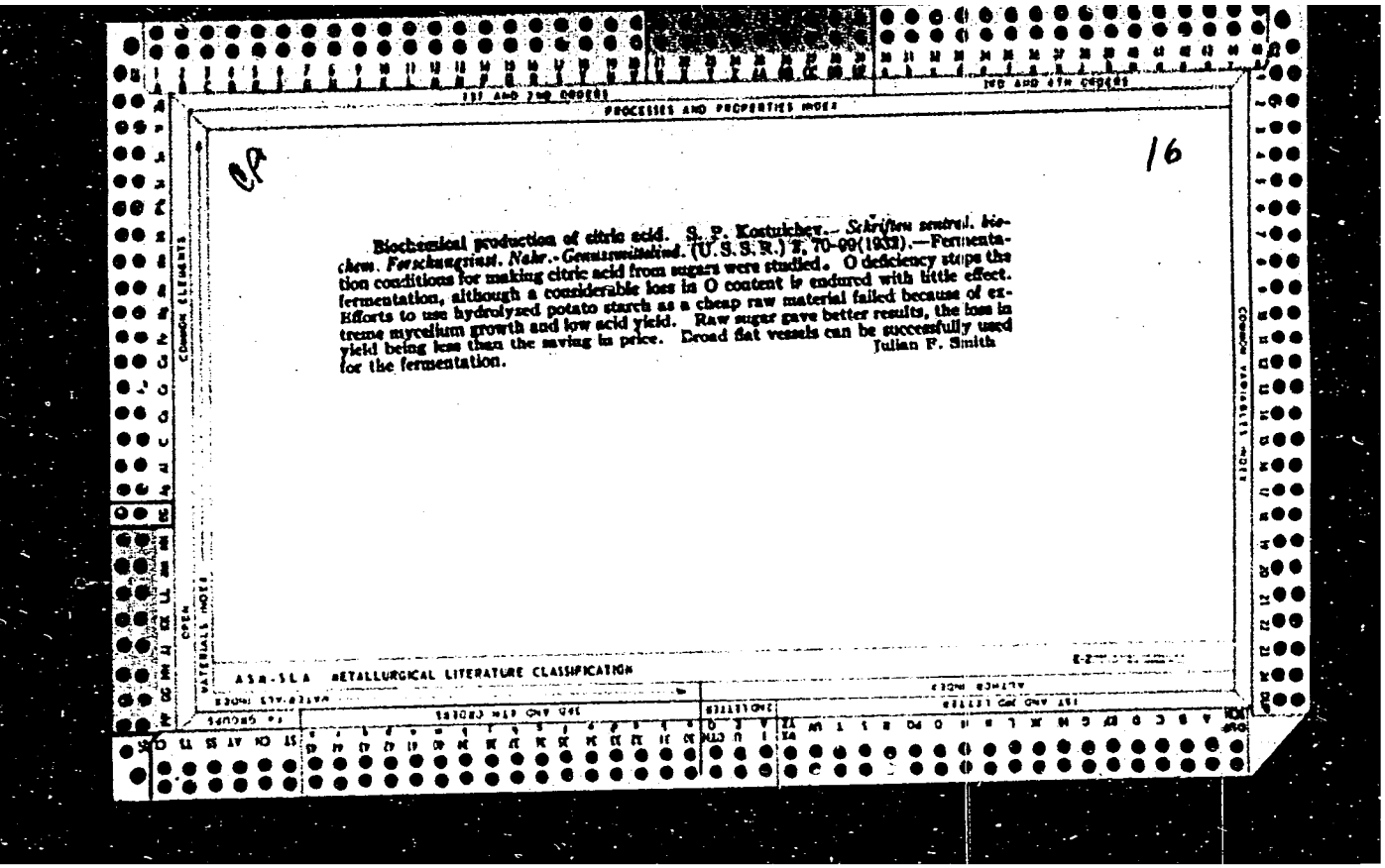
Thermal constant and temperature coefficient of fermentation by expressed yeast juice and yeast maceration juice. S. KOSTITSCHEV and G. MEDVEDEV (Bull. Acad. Sci. U.S.S.R., 1931, 655—660).—Chemical reactions in living cells may be characterised by the high vals. of their heat of activation (thermal constt.), $A = \log_e(k_2/k_1).RT_2T_1/(T_2 - T_1)$, and of their temp. coeff. Q_{10} at low temps. For fermentations by expressed and macerated juices from yeast, no thermal constt. exists; the vals. of A and Q_{10} for the two juices are very high for the range 1—12° or even for 5—12°. It is concluded that zymase is not a single enzyme and, owing to the regular formation of the same products over the temp. range 1—40°, probably not a simple mixture of different enzymes. T. H. POPE.



BC

A 4

Fixation of atmospheric nitrogen and formation of ammonia by *Azotobacter*. S. P. Kostytschev and Shelgunova (Bull. Acad. Sci. U.S.S.R., 1931, 661—671).—NH_3 is the first identifiable product of the fixation of atm. N_2 by *Azotobacter*; its formation occurs only in presence of energy-providing material. *A. Winelandii* forms NH_3 by destruction of org. N compounds; with glycine and peptone, this process consists of deamination. Such secondary formation of NH_3 is possible only after the complete consumption of the energy-providing material, and hence differs sharply from the primary formation. Each of these reactions takes place only in living cultures. *A. Winelandii* is not killed when kept for 2 days in an O_2-free atm., but in absence of O_2 fixation of atm. N_2 is greatly retarded. T. H. Pope.



PROCESSES AND PROPERTIES INDEX

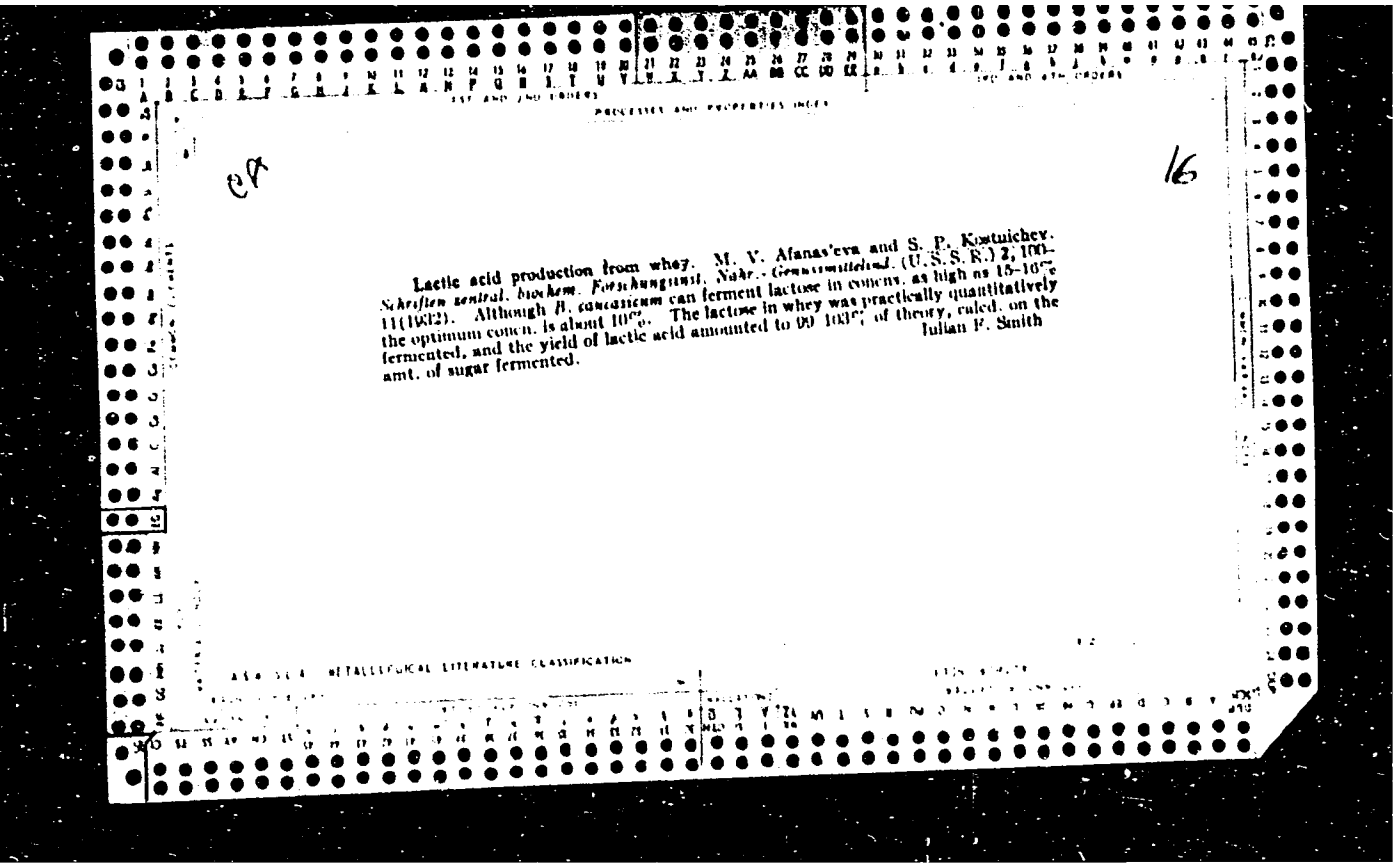
OP

16

Biochemical production of citric acid. S. P. Kostychev. *Schriften zentral. biochem. Forschungsinst. Nahr.-Genussmittelind.* (U.S.S.R.) 2, 70-99(1933).—Fermentation conditions for making citric acid from sugars were studied. O deficiency stops the fermentation, although a considerable loss in O content is endured with little effect. Efforts to use hydrolysed potato starch as a cheap raw material failed because of extreme mycelium growth and low acid yield. Raw sugar gave better results, the loss in yield being less than the saving in price. Broad flat vessels can be successfully used for the fermentation.

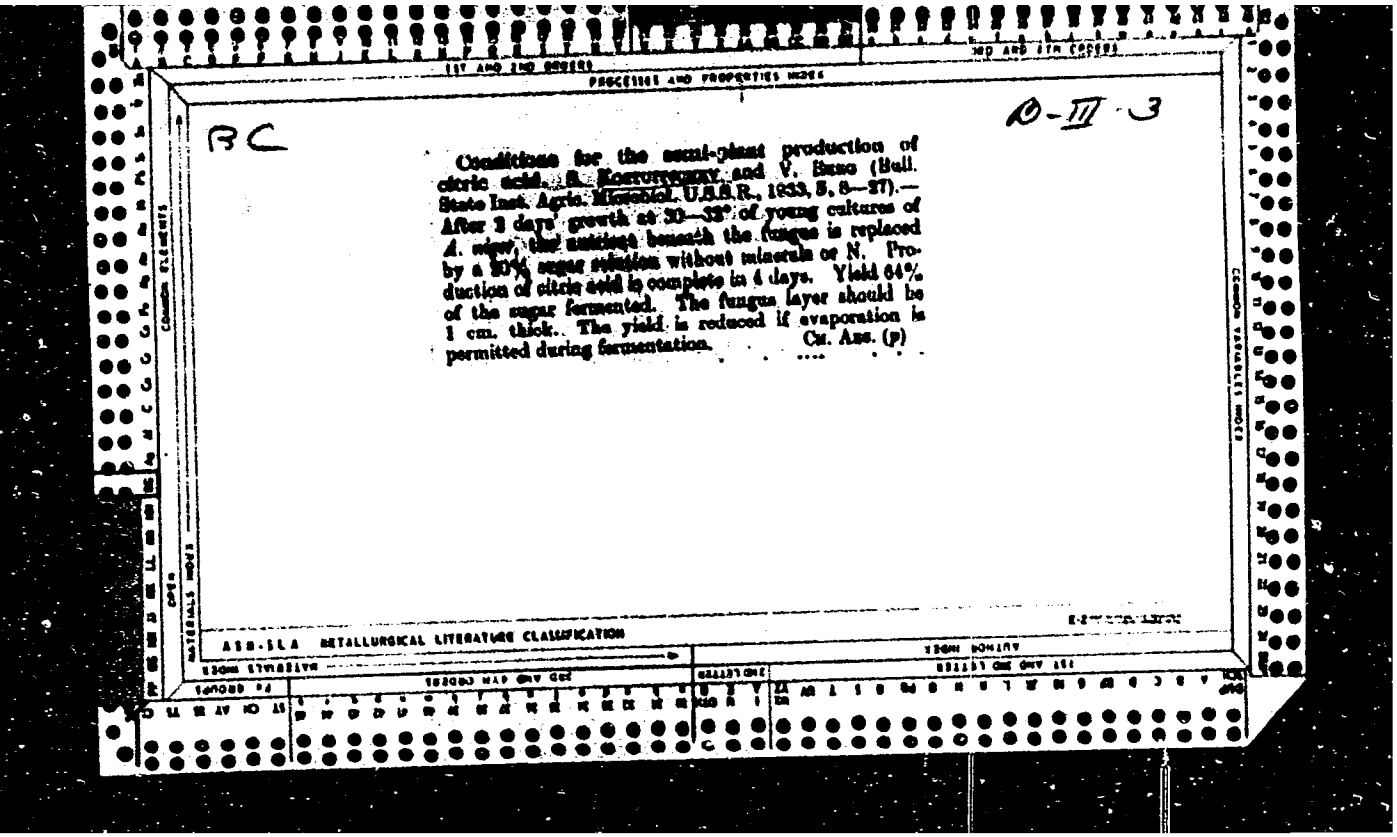
Julian F. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Lactic acid production from whey. M. V. Afanas'eva and S. P. Kostuichev. *Schriften zentral. biochem. Forschungsinst. Nahr.- Genussmittelind.* (U.S.S.R.) 2, 100–11(1932). Although *B. caucasicum* can ferment lactose in concns. as high as 15–16% the optimum concn. is about 10%. The lactose in whey was practically quantitatively fermented, and the yield of lactic acid amounted to 99–103% of theory, calcd. on the amt. of sugar fermented.

Julian F. Smith



BC

D-III-3

Conditions for the semi-plant production of citric acid. S. Kostytschew and V. Bano (Bull. State Inst. Agric. Microbiol. U.S.S.R., 1933, 5, 5—27).—After 2 days' growth at 30—32° of young cultures of *A. niger*, the nutrient beneath the fungus is replaced by a 20% sugar solution without minerals or N. Production of citric acid is complete in 4 days. Yield 64% of the sugar fermented. The fungus layer should be 1 cm. thick. The yield is reduced if evaporation is permitted during fermentation. Ch. Abs. (p)

KOSTYCHEV, Sergey Pavlovich

N/5
641
.K86

Izbrannyye Trudy PO Fiziologii I Biokhimii Mikroorganizmov (Selected Works Concerning Physiology and Biochemistry of Microorganisms)
Moskva, Akademkniga, 1956.
V. Graphs, Ports, Tables.
At Head of Title Page: Akademiya Nauk SSSR.
Bibliography at End of Each Chapter.
Lib. Has: V 1.

KOSTYCHEVA, G.

This we can do. Mest. prom. i khud. promys. no.5:2 My '63.
(MIRA 16:7)

1. Direktor Orekhovo-Zuyevskogo rayonnogo bytovogo kombinata, Moskovskaya obl.
(Orekhovo-Zuyevo—Service industries)

KHORUNZHIY, V.A., red.; RIBAS, Yu.M., red.; BORISEVICH, Z.S., red.; VERTYACHIKH, V.G., red.; KOST'YEV, N.K., red.; MOVSESOV, N.S., red.; ZHIGULIN, Yu.V., red.; RAKOVICH, I.I., red.; RUVINSKIY, V.A., red.; TULIN, V.S., red.; FETISOV, P.A., red.; FILIMONOV, P.V., red.; IGLITSYN, I.L., red.; LARIONOV, G.Ye., tekhn.red.

[Rules for the manufacture of explosion-proof electric equipment] Pravila izgotovleniia vzryvozashchishchennogo elektrooborudovaniia. Moskva, Gos.energ.izd-vo, 1960. 54 p. (MIRA 13:11)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po avtomatizatsii i mashinostroyeniyu.
(Electric apparatus and appliances)

NIKITIN, P.Z.; KOST'YEV, N.K.; BORISEVICH, Z.S.

Second Conference on Blastproof Electrical Equipment. Prom.energ. 17 no.5:54-55 My '62. (MIRA 15:5)
(Electric engineering—Safety regulations)
(Donetsk—Congresses)

KOSTYGIN, G.S., inzh.

Elimination of network faults in VTI regulators. Elek. sta. 36 no.12:79 D '65. (MIRA 18:12)

LILENKOV, I. P. (Candidate of Veterinary Sciences) and KOSTYGINA, R. F. (Veterinary Doctor, Arzamassk Inter-District Veterinary Bacteriological Laboratory, Gor'ki Oblast'). (Abstracted by V. A. ALIKAYEV)

"Notes on the method used to determine carotene in blood sera by means of G. D. Dubrovins's apparatus."
Veterinariya, vol. 39, no. 2, February 1962 pp. 81

LILENKOV, I.P., kand.veterinarnykh nauk; KOSTYGINA, R.F., veterinarnyy vrach

Remarks on the problem of using infusions of hay, conifer needles, and silage juice. Veterinariia 37 no.1:59-60 Ja '60.
(MIRA 16:6)

1. Veterinarno-bakteriologicheskaya laboratoriya, g. Arzamas.
(Hay--Therapeutic use)
(Confierae--Therapeutic use)
(Ensilage--Therapeutic use)

1. KOSTYGO, ". ang.

2. .USSR (600)

4. Dairy Plants

7. Determination of productive capacity, Molochn. prom. 14 No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

L 09389-67 EWP(k)/EWT(m)/EWP(t)/ETI IJP(c) JD/HW

ACC NR: AR6033107 SOURCE CODE: UR/0137/66/000/007/D043/D043

AUTHOR: Bogolyubov, G. R.; Gol'dfarb, V. M.; Donskoy, A. V.; Kostygov, A. S.; Stepanov, A. V.

32

TITLE: Producing thin-walled flattened sheet pipe (radiator strip) directly from the melt

18 18

SOURCE: Ref. zh. Metallurgiya, Abs. 7D316

REF SOURCE: Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena, no. 365, 1965, 75-89

TOPIC TAGS: pipe, metal drawing, radiator pipe, flattened pipe

ABSTRACT: Metal drawing for radiator strip has been carried out on a laboratory unit. The strip was drawn from A Mts alloy. The type of equipment and some technological problems were developed and solved for producing 4-, 6- and 10-channel strip with a 0.3—1.0-mm gage. The production technology for a 13 channel strip is described. An experimental batch (~300 m) of radiator strip for two radiators of a tractor radiator was produced and analyzed. Semicontinuous and continuous units were designed for producing thin-walled flattened sheet pipes

Card 1/2 UDC: 621.774.21

L 09389-67
ACC NR: AR6033107

directly from the melt. Orig. art. has: 8 figures. Bibliography of 15 titles.
L. Kochenova. [Translation of abstract]

SUB CODE: 13/

Card 2/2

L 03766-67 EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/WW/HW/JG

ACC NR: AR6029496 SOURCE CODE: UR/0137/66/000/006/D036/D036

AUTHOR: Donskoy, A. V.; Kostygov, A. S.; Klitin, N. P.; Lokshin, V. A.; Stepanov, A. V.

TITLE: Production of longitudinally ribbed pipe from molten metal and the investigation of thermal and manufacturing properties of the pipe

SOURCE: Ref. zh. Metallurgiya, Abs. 6D251

REF SOURCE: Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena, no. 265, 1965, 12-32

TOPIC TAGS: pipe, ribbed pipe, convective heat exchange

ABSTRACT: Longitudinally-ribbed pipes produced from molten metal by the A. V. Stepanov method possess a combination of properties which in a number of cases, makes them suitable for use in the production of heat-exchange equipment. The convective heat exchange in clusters of longitudinal pipe has a pattern identical to internal heat exchange in channels during longitudinal joining. The production technology of longitudinally ribbed pipes is discussed in detail. Orig. art. has: 14 figures. L. Kochenova. [Translation of abstract] [AM]

SUB CODE: 13/

Card 1/1

UDC: 621.771.35

L 08339-67 EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/HW/WB

ACC NR: AR6033103 SOURCE CODE: UR/0137/66/000/007/G028/G029

AUTHOR: Gol'dfarb, V. M.; Kostygov, A. S.; Yukhno, M. M.; Stepanov, A. V.

TITLE: Obtaining copper, brass, and bronze rods directly from the melt

SOURCE: Ref. zh. Metallurgiya, Abs. 7G236

REF SOURCE: Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena, v. 265, 1965, 144-150

TOPIC TAGS: molten metal, drawing, rod drawing

ABSTRACT: Laboratory experiments have been carried out for producing rods from copper, bronze, and brass by drawing directly from the melt. The process of drawing is similar to that for aluminum alloys. The drawing equipment consists of an induction furnace with a vacuum-tube generator and a graphite-fireclay crucible; a protective atmosphere is recommended so as to ensure a smooth surface and minimize both oxidation and burning out the alloy components. Orig. art. has: 2 figures and 1 table. Bibliography of 6 titles. [Translation of abstract]

SUB CODE: 11/

Card 1/1 nat UDC: 669.3.04

ANDREYEVA, Z.F., dots., kand. nauk; KOSTYGOV, A.S., nauchnyy sotrudnik.

Characteristics of certain eluents in the ion exchange separation of ceria earths. Dokl. TSKhA no.29:389-391 '57. (MIRA 11:8)
(Rare earths) (Trilon)

5(2) PHASE I BOOK EXPLOITATION SOV/1727

Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii

Redkozemel'nyye elementy; poluchenity, analiz, primeneniye (Rare Earth Elements; Extraction, Analysis and Application) Moscow, Izdvo AN SSSR, 1958. 331 p. 2,200 copies printed.

Resp. Ed.: D. I. Ryabchikov, Professor; Editorial Board: I. P. Alimarin, Corresponding Member, USSR Academy of Sciences; I. E. Zavaritskiy, Doctor of Chemical Sciences; K. V. Kalytnov, Candidate of Technical Sciences; V. I. Kuznetsov, Doctor of Chemical Sciences; V. M. Peshkova, Candidate of Chemical Sciences; and Ye. S. Shlyanskiy, Candidate of Chemical Sciences; Ed. of Publishing House: D. E. Trifonov and Z. G. Levi; Tech. Ed.: E. G. Markovich.

PURPOSE: This book is intended for scientists, chemists, teachers and students of higher educational institutions, chemical and industrial engineers, and other persons concerned with the extraction, preparation, assay or study of rare earth elements.

COVERAGE: This collection contains reports presented at the June 1956 Conference on Rare Earth Elements at the Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy of the Academy of Sciences USSR. The articles treat chemical methods of separating rare earth mixtures, methods of processing rare earth ores, ion exchange chromatography, chemical analysis, and some industrial applications of rare earths. Aids from contributing authors, the editors mention the following Soviet scientists, who are studying rare earth elements, rare earth deposits, extraction methods, and the preparation of oxides and salts: Martynov, Malyshev, Khrushchev, Malkov, Nikitaveskiy, Chernyshev, Baratov, Belousov, Zolotov and especially, N. A. Orlov, who first obtained the majority of rare earth elements in the pure state, separated many complex molecular compounds of these elements, and determined their specific properties. References are given at the end of each article.

TABLE OF CONTENTS:

L 12410-65 EWT(m)/EWP(b) GD/JG

ACCESSION NR: AP4048364 S/0032/64/030/011/1339/1343

AUTHOR: Melamed, Sh. G.; Kostyrgov, A. S.; Lishchenko, T. V.

TITLE: Spectrochemical determination of rare-earth impurities in rare-earth oxides

SOURCE: Zavodskaya laboratoriya, v. 30, no. 11, 1964, 1339-1343

TOPIC TAGS: rare earth oxide, yttrium oxide, neodymium oxide, praseodymium oxide, lanthanum oxide, rare earth oxide analysis, spectrochemical analysis, rare earth impurity determination, impurity concentration, ion exchange chromatographic concentration

ABSTRACT: A combined chemical and spectroscopic method has been developed for analyzing rare-earth impurities in high-purity yttrium, neodymium, praseodymium, and lanthanum oxides. The impurities concentration technique--a preliminary step to their spectroscopic determination--was perfected to increase the sensitivity of the spectroscopic analysis. Chromatographic ion exchange in a column packed with KI-2 cationic resin was described for concentrating Ho, Dy, Tb, and Gd in yttrium oxide; Sm, Pr, Ce, and La in neodymium oxide; Nd, Ce, and La in praseodymium oxide; and Nd, Pr, and Ce in lanthanum

Card 1/3

L 12/10-65
ACCESSION NR: AP4048364

oxide. Sorption of the rare-earth elements was effected from solutions containing rare-earth chlorides, and the elution of rare-earth impurities with a solution of complexone. Rare-earth complex compounds in each fraction of eluate were decomposed with oxalic acid and rare-earth oxalate precipitate converted to oxides, which were analyzed spectroscopically for impurities. Additions of coprecipitating impurities, either inactive or radioactive (isotopes), were necessary in the cases of fractions with impurity content below the sensitivity limit (10^{-3}—10^{-1}%) of direct spectroscopic analysis. The increase in sensitivity measured by the maximum enrichment factor was 10—250, depending on impurity and base material. The recovery of rare-earth impurities determined from the total γ-radioactivity in the eluate was in the 90—104% range. The ion-exchange method of separating rare-earth impurities can be employed for concentrating as low as 10^{-4}—10^{-3}% impurities. Spectroscopic analysis for one element may be limited to one eluate fraction only, if radioactive tracers are introduced into the original solution before sorption. The formula for calculating the content of an element in the sample is given. The spectral excitation source was a d-c arc between carbon electrodes. The spectra were produced on a DFS-3 spectrograph with diffraction grating and were recorded photographically. Analytical pairs of spectral lines and the formula for calculating impurity concentration in the sample are given. Orig. art. has: 3 figures, 3 tables, and 2 formulas.

Card 2/3

L 12410-65

ACCESSION NR: AP4048366

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proektnyy institut redkometallicheskoy promyshlennosti (State Design and Planning Scientific Research Institute of the Rare Metals Industry)

SUBMITTED: 00 ENCL: 00 SUB CODE: GC

NO REF SOV: 001 OTHER: 003 ATD PRESS: 3126

Card 3/3

KOSTYGOV, I.N.

Use of plastics-impregnated plywood in practice. Stan.i instr. 26 no.11:38 N '55. (MLRA 9:2)
(Plywood)

25(2) PHASE I BOOK EXPLOITATION SOV/1296

Kostygov, Igor' Nikiforovich and Shilin Shmulylovich Sheynin
Avtomaty prodol'nogo tocheniya (Automatic Swiss-type Longitudinal Turning Machines) Moscow, Mashgiz, 1958. 293 p. 7,000 copies printed.

Reviewer: Boguslavskiy, B.L., Professor; Ed.: Gutner, N.G., Engineer; Ed. of Publishing House: Chfas, M.A.; Tech. Ed.: Sokolova, L.V.; Managing Ed. for Literature on Machine-building Technology (Leningrad Division, Mashgiz): Naumov, Ye.P.,; Engineer.

PURPOSE: This book may be used as an operating manual for the various models of automatic lathes described, as well as for the study of automatic machines for longitudinal form turning. It may also be utilized in designing special machines based on Swiss-type automatic lathes.

COVERAGE: The book acquaints the reader with the most commonly used Soviet-made single-spindle automatic lathes for longitudinal form turning. It also gives a description of their construction, special features and characteristics, and discusses the problems of maintenance and settings for the most efficient operation of

Card 1/6

KOSTYGOV, I.N.

The 1140-type automatic single-spindle turret lathe. Biul.tekh.-ekon.inform. no.5:13-14 '58. (MIRA 11:7)
(Lathes)

KOSTYGOV, I.N.

BARUN, Vladimir Abramovich; BUDINSKIY, Aron Abramovich; SHAUMYAN, G.A., prof., doktor tekhn.nauk, retsenzent; KOSTYGOV, I.N., inzh., red.; BORODULINA, I.A., red.izd-va; VARKOVETSKAYA, A.I., red.izd-va; NIKOLAYEVA, I.D., tekhn.red.

[Automatic control of machine tools; means of automatization and their use] Avtomaticheskoe upravlenie metallorezhushchikh stankov; sredstva avtomatizatsii i ikh ispol'zovanie. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 295 p. (MIRA 12:7)

(Machine tools) (Automatic control)

Kostygov, I. N.

PHASE I BOOK EXPLOITATION SOV/4143

Avtomatizatsiya mekhanicheskoy obrabotki v Leningradskoy promyshlennosti (Automation of Mechanical Machining Processes in Leningrad Industry) Moscow, Mashgiz, 1959. 358 p. Errata slip inserted. 4,000 copies printed.

General Ed.: I.M. Kucher; Reviewers: N.V. Reshetikhin, Candidate of Technical Sciences, Docent, and Ye. V. Miller, Candidate of Technical Sciences, Docent; Eds. of Publishing House: T.L. Leykina and M.A. Chfas; Tech. Ed.: O.V. Speranskaya; Managing Ed. for Literature on Machine-Building Technology (Leningrad Division, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This book is intended for technical personnel.

COVERAGE: The book deals with the automation of mechanical machining processes in small-lot production in Leningrad industry. The use of hydraulic copying slide rests is explained, and practical experience in the introduction of copying slide rests into leading Soviet plants is described. The improvement of such slide rests, the technical and economic effects resulting from their usage, and methods of designing master forms are discussed. New designs of hydraulic slide rests are described. Emphasis is laid upon problems of program control, especially for the simplest control systems, and a number of the original systems are described. Automation problems involved in the group machining method are investigated. No personalities are mentioned. There are 57 references: 46 Soviet and 11 English.

SECTION II.

NUMERICAL PROGRAM CONTROL

SECTION III.

AUTOMATION IN LOT PRODUCTION BASED ON THE GROUP MACHINING METHOD

AVAILABLE: Library of Congress

Card 5/5

VK/pw/mas
10-25-60

IVANOV, Sergey Aleksandrovich; KOSTYGOV, I.N., inzh., retsenzent; MIRKIN, M.S., inzh., red.; BORODULINA, I.A., red.izd-va; SHCHETININA, P.V., tekhn.red.

[Planning multiple adjustment of automatic lathes] Proektirovanie gruppovykh naladok tokarnykh avtomatov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 70 p. (MIRA 14:1)

(Lathes)

KHIZHNYAK, P.D., glavnyy red.; GLAZOV, G.A., zam.glavnogo red.; BLYUMBERG, V.A., red.; VASIL'KOV, B.A., red.; GLUSHKOV, A.T., red.; ZHOLOBOV, V.V., red.; KAMNEV, P.V., red.; KANTIYEV, N.M., red.; KISELEV, M.I., red.; KOSTYGOV, I.N., red.; MOISEYEV, A.A., red.; NOVIKOV, A.P., red.; SIMIN, S.A., red.; CHERNYSHEV, P.S., red.; SHAGURIN, K.A., red.; SHUB, I.Ye., red.; DEMENT'YEVA, I.K., red.; SEMENOVA, A.V., tekhn.red.

[Experience of mechanical engineers; technical information publication] Opyt mashinostroitelei; informatsionno-tekhnicheskii sbornik. Leningrad, Sovet nar.khoz.Leningr.ekon.administrativnogo raiona. TSentr.biuro tekhn.informatsii, 1960. 88 p.
(MIRA 13:11)

(Mechanical engineering)

SURKOV, V.D.; ROGOV, I.A.; KOSTYGOV, L.V.

Orientation of the particles of biological suspensions in a high-frequency electric field. Izv. vys. ucheb. zav.; pishch. tekh. no.2:83-86 '63. (MIRA 16:5)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy promyshlennosti, kafedra protsessov i apparatov pishchevykh proizvodstv.

(Suspensions (Chemistry)) (Electric fields)

ORLIN, A.S., professor; VYRUBOV, D.N.; KOSTYGOV, N.I.; LEBEDEV, S.Ye. [deceased]; ROGANOV, S.G.; SIMAKOV, I.F.; CHURSIN, M.M.; PETROV, V.A., professor, retsenzent [deceased]; PONOMAREVA, K.A., redaktor; MODEL', B.I., tekhnicheskiy redaktor

[Internal combustion engines] Dvigateli vnutrennego sgoraniia. Pod red. A.S.Orlina. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry. Vol.2. [Design and calculations] Konstruktsii i raschet. 1955. 534 p. (MLRA 9:8)
(Gas and oil engines)

KOSTYGOV, N.I.

PHASE I BOOK EXPLOITATION SOV/4188

Alekseyev, Valentin Petrovich, Nikolay Ivanovich Kostygov, Mikhail Georgiyevich Kruglov, Aleksey Nikolayevich Krylov, Oleg Borisovich Leonov, and Georgiy Nikolayevich Mizernyuk

Dvigateli vnutrennego sgoraniya; opisatel'nyy kurs (Internal Combustion Engines; Descriptive Course) Moscow, Mashgiz, 1960. 451 p. 15,000 copies printed.

Ed. (Title page): A. S. Orlin, Professor; Ed. (Inside book): L. I. Yegorkina; Managing Ed. for Literature on Automotive, Tractor, and Agricultural Machine Building: I. M. Bauman, Engineer; Tech. Eds.: B. I. Model' and T. F. Sokolova.

PURPOSE: This textbook is intended for students at machine-building schools of higher education, and for personnel engaged in the production and operation of internal-combustion engines.

COVERAGE: The book describes the construction and operation of all the main types of reciprocating internal-combustion engines, and of individual

Card 1/8

Internal Combustion Engines; (Cont.) SOV/4188

systems and mechanisms used in them. The book corresponds to the program of the course on "Internal-Combustion Engines" at the Moscow Higher Technical Institute imeni N. Ye. Bauman. V. P. Alekseyev wrote chapters V and VI; N. I. Kostygov, the introduction, section 2 of chapter I, and chapters II, III and IV; M. G. Kruglov, chapter VII (except sections 40 and 42), section 57 of chapter X, and chapters XII and XIII; A.N. Krylov, chapter VIII, and sections 40 and 42 of chapter VII; O. B. Leonov, section 1 of chapter I, and chapter IX; G. N. Mizernyuk, chapters X (except section 57) and XI. The authors thank Professor D. N. Vyrubov. There are 38 references: 35 Soviet, 2 English and 1 French.

TABLE OF CONTENTS:

Card 2/8

ORLIN, A.S., prof.; VYRUBOV, D.N.; ALEKSEYEV, V.P.; KALISH, G.G.; KOSTYGOV, N.I.; KRUGLOV, M.G.; KRUTOV, V.I.; MIZERNYUK, G.N.; ROGANOV, S.G.; STEPANOV, Yu.A., prof., retsenzent; YEGORKINA, L.I., red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Internal combustion engines]Dvigateli vnutrennego sgoraniia. Pod red.A.S.Orlina. Moskva, Mashgiz. Vol.3. [Systems, regulation, automatic control]Sistemy. Regulirovanie. Avtomatizatsiia. 1962. 307 p. (MIRA 16:1)
(Gas and oil engines) (Automatic control)

KOSTYGOV, N.M.

Effect of thiol compounds and mercury on the secretion and resynthesis of proteins and lipoids in the small intestine [with summary in English]. Vop.med.khim. 3 no.6:420-427 N-D '57. (MIRA 11:2)

1. Kafedra farmakologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta

(SULFHYDRYL COMPOUNDS, effects,
thiol deriv., on small intestine lipoproteins & phospholipids metab. (Rus))
(MERCURY, effects,
on small intestine lipoproteins & phospholipids metab. (Rus))
(PHOSPHOLIPIDS, metabolism,
samll intestine, eff. of mercury & thiol cpds. (Rus))
(LIPOPROTEINS, metabolism,
same)
(INTESTINES SMALL, metabolism,
lipoproteins & phospholipids, eff. of mercury & thiol cpds. (Rus))

KOSTYGOV, N.M.

Antidote effect of mercaptosuccinic acid and unithiol in relation to mercury. Farm. i toks. 21 no.3:64-69 My-Je '58 (MIRA 11:7)

1. Kafedra farmakologii (zav. - deystvitel'nyy chlen AMN SSSR prof. S.V. Anichkov) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

(DIURETICS, MERCURIAL, antagonists,
mercaptosuccinic acid & sodium 2, 3-dimercaptopropanesulfonate, in animals (Rus))
(SUCCINATES, effects,
mercaptosuccinic acid, inhib. of mercurial diuresis & comparison with sodium 2,3-dimercaptopropanesulfonate in animals (Rus))
(SULFHYDYL COMPOUNDS, effects,
sodium 2, 3-dimercaptopropanesulfonate, on mercurial diuresis & comparison with mercaptosuccinic acid in animals (Rus))

KOSTYGOV, N.M.

Mercaptosuccinic acid and unithiol as antidotes of mercury. Trudy LSGMI 37:214-237 '58. (MIRA 12:8)

1. Kafedra farmakologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - deystvitel'nyy chlen AMN SSSR prof. S.V.Anichkov).

(MERCURY, pois.
antidotal eff. of 2,3 dimercaptopropane sodium sulfonate & mercaptosuccinic acid in exper. animals (Rus))
(SULFHYDRYL COMPOUNDS, eff.
2,3-dimercaptopropane sodium sulfonate, antidotal eff. in exper. mercury pois. (Rus))
(THIOMALATES, eff.
mercaptosuccinic acid, antidotal eff. in exper. mercury pois. (Rus))

KOSTYGOV, N. M. Cand Med Sci -- (diss) "Influence of thiol preparations (mercaptosuccinic acid and unithiol) upon the effect produced by mercury compounds." Len, 1959. 17 pp (Min of Health RSFSR. Len Sanitary Hygiene Med Inst), 200 copies (KL, 47-59, 116)

MEL'NIKOVA, T.A.; ZAPLATINA, O.P.; KOSTYGOV, N.M. (Leningrad)

Effect of certain new cholinolytic substances on the function of the adrenal cortex; clinical and experimental investigations. Probl.endok.i gorm. 5 no.5:14-19 S-O '59. (MIRA 13:5)

1. Iz kafedry farmakologii Leningradskogo khimiko-farmatsevticheskogo instituta (zav. - doktor med.nauk T.A. Mel'nikova) i khirurgicheskogo otdeleniya Oktyabr'skoy zheleznodorozhnoy bol'nitsy (zav. Z.P. Sorokina).

(PARASYMPATHOLYTICS pharmacol.)
(ADRENAL CORTEX pharmacol.)

YEFIMENKO, O.M.; MEL'NIKOVA, T.A.; ZOZULYA, R.N.; KOSTYGOV, N.M.

Polyporenic acid A, an antibiotic from the fungus Polyporus betulinus (Bull) Karst. Antibiotiki 6 no.3:215-220 Mr '61. (MIRA 14:5)

1. Laboratoriya biokhimii nizshikh rasteniy (zav. - prof. P.A. Yakimov) Botanicheskogo instituta AN SSSR i kafedra farmakologii (zav. - prof. T.A.Mel'nikova) Leningradskogo khimiko-farmatsevticheskogo instituta.

(ANTIBIOTICS)

MEL'NIKOVA, T.A.; KOSTYGOV, N.M.

Comparative study of the antipyretic, analgesic, and antiphologistic action of some pyrazolidine derivatives. Trudy Len.khim.-farm.inst. no.13:220-228 '62. (MIRA 15:10)

1. Kafedra farmakologii Leningradskogo khimiko-farmatsevticheskogo instituta (zav. prof. T.A.Mel'nikova).
(PYRAZOLIDINE)

KOSTYGOV, N.M.

Pharmacological properties of octatensin (2(1'-azacyclooctyl)-ethyl guanidine sulfate). Farm. i toks. 26 no.1:28-35 Ja-F '63. (MIRA 17:7)

1. Kafedra farmakologii (zav. - prof. T.A. Mel'nikova) Leningradskogo khimiko-farmatsevticheskogo instituta.

15 8100

21419
S/191/61/000/012/003/007
B101/B110

AUTHORS: Li, P. Z., Mikhaylova, Z. V., Sedov, L. N., Kostygov, V. A.

TITLE: Synthesis and examination of unsaturated N-bis-β-hydroxy-ethyl aniline polyester resins

PERIODICAL: Plasticheskiye massy, no. 12, 1961, 11-14

TEXT: This paper deals with the synthesis and examination of unsaturated polyester resins whose water resistance was increased by aromatic components. N-bis-β-hydroxy-ethyl aniline (diethanol aniline) was used as initial substance. The synthesis was conducted by esterification of commercial diethanol aniline (melting point: 53-55°C) with maleic or maleic + phthalic acids. The compounds were fused at 175 ± 2°C in a CO_2 atmosphere. The reaction course was observed by determining the acid number. After 35-45 min, the compounds were cooled down to 150-170°C, 0.02% of hydroquinone was added as stabilizer, and they were cooled down to room temperature. Reaction time was 3-5 hr, and the yield approximately 95%. Structures

Card 1/5